robbe
Modellsport

NEW ITEMS 2014

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The complete robbe modelling range may be found at www.robbe.com on the Internet or in the robbe speciality catalogues Flyingworld, Heliworld, RC World as well as Electronic World.

General Link Modul S-FHSS 2.4 GHz

No. NE480193

S-FHSS General Link

The second generation of the robbe / Nine Eagles „General Link System“ now exploits the FUTABA S-FHSS transmission system.

Models with the new transmission system are indicated by the „FTR“ suffix (FUTABA Transmitter Ready). With these models you can choose between the „RTB“ (Ready-To-Bind) version, i.e. without transmitter in the set, or the „RTF“ (Ready To Fly) version, with Nine Eagles S-FHSS transmitter included in the set. Owners of a FUTABA radio control system with the S-FHSS transmission system can bind the new FTR models directly to their transmitters.

The S-FHSS General Link module is available as an individual low-cost set which allows a FUTABA system without the S-FHSS transmission system, or another make of radio control system transmitter, to be bound to any FTR model. The module is also compatible with transmitters made by Spektrum®, Hitec®, Walkera® and JR®.

Set contents:

- S-FHSS General Link module
- Three cable sets for connecting the module to various makes of radio control system
- 3.7 V LiPo battery for powering the module
- USB charger for 3.7 V LiPo battery

Transmitter compatibility list:

FUTABA, all transmitters with six or more channels without S-FHSS transmission system (FF7 transmitter: software version 3.F or higher)
JR® ZG8
SPEKTRUM® DX8, DX7, DX6
HITEC® AURORA 9
WALKERA® DEVO 8S

Specification, GL module

Operating frequency:	**2400-2483 MHz**
Transmission system:	S-FHSS
FM rate:	250 Kilobits per second
Channel count:	6 channels
Operating voltage:	3,3 bis 4,2 V
Current drain:	less than 150 mA
Transmitter output:	0.1 W
Operating time:	approx. 2 hours
Audible warning after five minutes without operating the transmitter	
(Visual! All Mode LEDs flash simultaneously!)	

FUTABA Transmitter Ready – FUTABA Code Inside

FUTABA Transmitter Ready, abbreviated to FTR, applies to selected models from the Nine Eagles range. The transmitters and receivers of these models work with FUTABA S-FHSS Code and therefore also be used with FUTABA-transmitters running in S-FHSS Mode.

At the moment, the following transmitters may be used:

Skysport T4YF 2.4 GHz FHSS M2
No. F4074
Skysport T4YF 2.4 GHz FHSS M1
No. F4074M1
T6J-R2006GS 2.4 GHz FHSS
No. F4100
T-8J - R2008SB 2.4 GHz FHSS/S-FHSS
No. F4108
T18MZ - R7008SB 2.4GHz FASSTest® M2
No. F8073
T18MZ - R7008SB 2.4GHz FASSTest® M1
No. F8073M1

robbe AKADEMIE
lernen • staunen • erleben

Glider flying 2014

Participants can look forward to beautiful countryside in the Hahnenmoos Pass area, devoid of stones, with numerous launching points, at a height of 2000 to 2200 m.

Impressive gliding sites - Enjoy the company of other RC glider pilots - Broaden your knowledge

Experience model gliding at Europe's most beautiful soaring slopes – Wasserkuppe (Germany), Petit Ballon (France) or Hahnenmoos (Switzerland).
Under the watchful eye of robbe's expert seminar tutors you can experience these wonderful soaring sites, which are renowned far beyond their national boundaries. At the same time you can exchange experiences with like-minded modellers in the group, and find out more about model gliding, e.g. the best methods of detecting and exploiting thermals at the slope, or fine-tuning your landing technique.
The robbe Academy gliding events are ideal for any pilot who can launch and land his own model independently. You can bring along your own model, or book the events as a package-deal with a robbe Arcus Sonic 2 m glider. The Arcus Sonic is an ideal trainer with docile but precise flying characteristics, and an amazingly good performance even in quite strong winds.
At every event there are two experienced seminar tutors available to the participants (depending on the number of entrants), who look after all the modellers very individually, and are able to explain queries in detail.
Various subjects can be discussed in greater detail with the seminar tutors individually, such as:

- Finding and making use of thermals
- Recognising and exploiting slope lift
- Fine-tuning landing techniques
- Correcting the set-up of the participant's own model
- The use of telemetry and vario
- Getting to know new models and RC systems
- Experiencing OLC distance flying in theory and practice
- and much more.

The main focus is on the flying, and experiencing these renowned flying areas, which have many secrets to be discovered with their various launching and landing sites. The duration of the events varies according to the flying site.
Anyone who is confronted for the first time with the high-altitude landscape and the respect the mountains demand, will be delighted to feel the reassurance of having an experienced tutor to hand while he is flying his model. It sometimes takes considerable nerve to hurl one's model over the edge of the slope when the valley floor is several hundred metres below the launch site. After several flights in this imposing high-altitude Alpine landscape most modellers start to feel confident, and soon experience the true pleasure of flying.
Look forward to days of flying crammed full of exciting moments at impressive flying sites with the robbe Academy.

Hahnenmoos (Switzerland)

14.-18.07.2014

- Five-day seminar incl. five nights / double room / half-board / snacks
- Optional package-deal including Arcus Sonic model (Art. No. 2565)
- Optional additional day on 19.07.2014 (incl. one night / half-board / snacks)
- Accommodation in double room with half-board in the Berghotel at an altitude of 1957 m
- Arrival on the morning of the seminar

Petit Ballon (Vosges, France)

31.07.-02.08.2014

- Seminar (three days incl. two nights / double room / half-board / snacks)
- Optional package-deal including Arcus Sonic model (Art. No. 2565)
- Optional additional day on 03.08.2014 (incl. one night / half-board / snacks
- Accommodation in double / quadruple bedroom in a rustic farmhouse inn at an altitude of 1150 m

robbe premises and the Wasserkuppe (Rhön)

22.-25.06.2014 and 10.-13.08.2014

- Four-day seminar incl. three nights / breakfast / snacks
- Optional package-deal including Arcus Sonic model (Art. No. 2565)
- Optional additional day on 26.06.2014 or 14.08.2014 (incl. one night / breakfast)
- Accommodation in single room with breakfast in well-managed country inn at Nieder-Moos, Vogelsberg and the historic hotel at the Wasserkuppe (some double rooms)

The world-famous Wasserkuppe - the glider flyer's mountain - offers launching facilities in almost all compass directions.

The robust Arcus Sport thermal / slope soarer (Art. No. 3188) features a four-flap wing. Ideal for practising flying with camber-changing flaps.

A little theory is also provided.

Beginners' training Wasserkuppe (Rhön)

This taster course includes brief theoretical instruction in the basics of model gliders and radio control systems, „dry runs" and initial practical flying sessions in what is known as Trainer mode.
Requirements: None
Service: supervision by a model flying tutor of the Wasserkuppe flying school. Flying practice generally well away from the most heavily used launch areas.
Training based on equipment loaned from the Wasserkuppe flying school: robbe Arcus Sonic and robbe/Futaba systems used in wireless Trainer mode.
Dates: May - September

Co-operation partner

Getting started in slope flying Wasserkuppe (Rhön)

You learn the basics of controlling a model aircraft at the slope and in thermals. You will practise flying using what is known as a Trainer system. At any time the tutor can transfer and regain control of the model aircraft. This is a completely safe and very intensive way of learning. The intensive course goes into greater detail on specific phases of flight, e.g. launching, slope soaring, circling, thermalling, landing etc., with theoretical and practical instruction. The aim is safe control of the model during initial solo flights at the Wasserkuppe.
Requirements: basic skills of controlling a model glider are an advantage.
Service:supervision by a model flying tutor of the Wasserkuppe flying school. Flying practice generally well away from the most heavily used launch areas.
Training based on equipment loaned from the Wasserkuppe flying school: robbe Arcus Sonic and robbe/Futaba systems used in wireless Trainer mode.
Dates: May - September

Co-operation partner

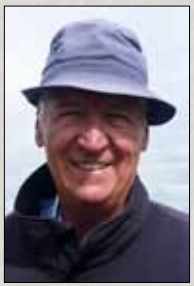
Detailed information and registration form available at: www.robbe.de/akademie

The robbe model flying site offers ideal facilities: open flying field, large take-off / landing strip, and - especially - good thermal activity.

Seminar Director Frank Schwartz

Seminar Director Wilfried Hörmann

Flight Tutor Jürgen Schild



Fluglehrer Lutz Thiele

robbe
ARCUS
S2.2

Arcus E 2.2 ARF

No. 2568

Semi-scale model glider with comprehensive technical features

Our model of the Arcus E 2.2 closes the gap between moulded EPO foam gliders intended for beginners and the larger scale gliders of wood or GRP construction. The Arcus E 2.2 gives the advanced model glider pilot the opportunity to exploit the numerous technical features of large models - such as retractable power unit, airbrakes and retractable wheel - in a low-cost model. At the same time this elegant scale glider retains the advantage of the robust EPO foam wing and fuselage.

Set contents

- Robust moulded EPO foam fuselage, wings and tail panels, decals applied
- Clear canopy with magnetic latch and cockpit insert
- Working retractable motor with electronic control unit and brushless motor from the robbe E-COLINE series, 7 x 4“ propeller
- Electric retractable undercarriage
- Fixed nosewheel unit
- Working servo-operated airbrakes
- 20 A brushless speed controller from the robbe E-COLINE series
- 7 robbe E-COLINE 9 g servos installed
- 1 robbe E-COLINE 25 g servo installed
- Small hardware items for final assembly
- Multi-lingual illustrated assembly instructions

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Wingspan approx.	2240 mm
Length approx.	1020 mm
Scale	01:09
Total surface area approx.	30,7 dm²
Wing loading approx.	35,8 g/dm²
All-up weight approx.	1100 g

RC functions

Elevator, Rudder, Aileron, Motor control, Landing flaps, retracting tricycle undercarriage, Retractable power unit

Essential accessories

T-8J - R2008SB 2.4 GHz FHSS/S-FHSS	1x F4108
LiPo-Akku ROXXY® Evo 3-1250 30C	1x 6607
POWER PEAK® A4 EQ-LCD 230 V / 12 V	1x 8560
Charge lead, T-connector	1x 8881
T-socket pack of 10	1x 8895

Replacement parts

Arcus E wing set	1x 25680001
Arcus E fuselage set	1x 25680002
Retractable motor + retractable wheel Arcus E	1x 25680003
Arcus E spoiler, pack of 2	1x 25680004
Arcus E nosewheel and retract unit	1x 25680005
Arcus E BL motor	1x 25680006
Arcus E canopy	1x 25680007
Arcus E spinner	1x 25680008
Arcus E wing joiner	1x 25680009
Arcus E fin	1x 25680010
Arcus E rudder	1x 25680011
25 g servo	1x 25680012
Arcus E small parts set	1x 25680013
9 g servo	1x 8976
ROXXY® BL Control 722 BEC	1x 8972

D-1954

L-Spatz 55

No. 2610

Scheibe L-Spatz 55 – THE vintage semi-scale glider from robbe, with a wingspan of 2.5 m.

The robbe L-Spatz 55 is a scale model of the vintage classic sailplane. The model is of conventional built-up all-wood construction, covered in iron-on fabric. Radio control system and electronics not included.

The full-size
The Scheibe L-Spatz 55 was a development of the Spatz A and Spatz B. It took the form of a shoulder-wing glider with a wingspan of 15 m and a glide angle of 1 : 29, which was good by the standards of the time. The glider first flew in 1954. By the end of 1962 the sailplane manufacturer Scheibe-Flugzeugbau GmbH - based at Dachau, near Munich - had produced more than 450 units of the L-Spatz 55, making it the most successful „Spatz“ of all.

The model
The robbe L-Spatz 55 is a semi-scale model to 1 : 6 scale, with a wingspan of 2.5 m. Its structure is conventional, and based on accurately laser-cut components. The L-Spatz 55 is supplied as a finished model, and is covered in antique colour iron-on fabric. The special surface texture of this material emphasises the model‘s vintage look. An aero-tow release is fitted in the fuselage nose. All the RC components are housed in the model‘s fuselage, where they are easily accessible. The canopy, which is retained by magnets, and the latched top fuselage hatch provide ease of installation and good access to all the airborne components. Not just on the ground: the robbe L-Spatz 55 also looks impressively realistic in the air. It‘s a superb experience to fly the model with the sun shining through the wings from above, showing off the fully built-up structure. Just like the original sailplane, the robbe L-Spatz 55 circles smoothly and elegantly, either at the slope or after an aero-tow.

The glider‘s realistic flying characteristics allow simple aerobatics such as rolls, loops and stall-turns. Low, slow passes and landing approaches at walking speed are simply a delight to pilot and onlooker alike.

The robbe L-Spatz 55 is a simply beautiful model, and a real eye-catcher!

Set contents
- Fuselage, wings, tailplane factory-assembled and covered in iron-on fabric in antique colour.
- Control surfaces slotted for hinges.
- Finished, vacuum-moulded, transparent canopy with frame attached.
- Magnetic canopy catch.
- Aero-tow release already fitted in nose.
- RC installation hardware such as control surface horns, hinges, pushrods etc.
- Comprehensive assembly instructions

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Wingspan approx.	2500 mm
Length approx.	1040 mm
Scale	1:6
Total surface area approx.	34,5 dm²
Wing loading approx.	30 g/dm²
All-up weight approx.	1155 g
Empty weight	700 g

RC functions
Aileron, Elevator, Rudder, Tow-release

Recommended accessories
Self-adhesive hook-and-loop tape, black, 2 x 20 mm x 10 m box 1x 50590001

Essential accessories

T-8J - R2008SB 2.4 GHz FHSS/S-FHSS	1x F4108
S3172SV servo	5x F1631
Power Pack 4NiMH 3500 flat (6A)	1x 4220
Servo extension lead 0.3 sq mm x 200 mm gold	3x 4644
Servo extension lead 0.3 sq mm x 1000 gold	2x 4646
6 A switch harness with charge socket	1x 8891

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FUTABA TRANSMITTER READY FTR Futaba CODE INSIDE 2.4GHz S.BUS

Mustang P51 3G FTR RTF 2.4GHz

Mustang P51 3G FTR RTF 2.4GHz **No. NE2004FTR**
Mustang P51 3G FTR RTB 2.4GHz **No. NE2004RTB**

FUTABA Transmitter Ready – FUTABA Code Inside

The Nine Eagles Mustang P51 3G FTR RTF is a compact, true-scale power model aircraft fitted with the advanced 3G stabilisation system. The new, revised version now features a four-channel radio control system with elevator, rudder and aileron control, and a new, finely detailed colour scheme. The Mustang P51's fast, direct flying characteristics make it suitable for advanced pilots with prior flying experience. The compact size and robust EPO foam construction make the Mustang P51 a straightforward fun model for those brief interludes when a „quick flight" can just be fitted in.

Stabilisation system
The integral triple-axis stabilisation system stabilises aileron, rudder and elevator, and supports the pilot during demanding flight manoeuvres and in windy flying conditions. If you use an optional Futaba FHSS transmitter, the stabilisation function can be switched on and off from the transmitter using a fifth channel.

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system supplied in the set conforms to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. As a result the model can be flown directly with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up and changing direction.
(The Mustang P51 is also available in an RTB version (without transmitter), which can simply be bound to an existing Futaba S-FHSS system. 1-NE2004RTB)

Set contents No. NE2004FTR
- Model aircraft of robust EPO foam construction
- Power system with miniature motor and anti-crash stop function
- Integral gyro stabilisation system
- LiPo battery, 3.7 V / 150 mAh
- Flight battery charge function in the transmitter
- 2.4 GHz four-channel transmitter, FUTABA Code Inside
- Replacement propeller
- 4 x AA-size dry cell
- Operating instructions

Set contents No. NE2004RTB
- Model aircraft of robust EPO foam construction
- Power system with miniature motor and anti-crash stop function
- Integral gyro stabilisation system
- LiPo battery, 3.7 V / 150 mAh
- USB charger for flight battery
- Replacement propeller
- Operating instructions

Features
The RTF version is supplied complete with 2.4 GHz radio control system (pre-set to Mode 2; can be set to Modes 1 - 2), LiPo flight battery, flight pack charge function in the transmitter.

Pre-flight check-list
Classification: power model aircraft
Qualification: Advanced
Flight area: Outdoors, zero to light wind
Flight time: 6 - 8 min.
Charge time: 45 - 90 min. (flight battery)
Radio control system LCD screen - four-channel - 2.4 GHz - FUTABA Code Inside
Special feature: gyro stabilisation system (values for flight and charge times are approximate, and may vary according to environmental influences).

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Wingspan approx.	400 mm
Length approx.	360 mm
Scale	01:28
All-up weight approx.	42 g

RC functions
Elevator, Rudder, Aileron, Motor control

Replacement parts

Mustang P51 FTR fuselage	1x NE200405
Mustang P51 FTR wing	1x NE200406
Mustang P51 FTR tail set	1x NE200407
Mustang P51 FTR control surface linkage	1x NE200408
Mustang P51 FTR control surface horn	1x NE200409
Propeller Mustang P51 FTR	1x NE200410
Mustang P51 FTR receiver	1x NE200411
Mustang / YAK FTR charge lead adapter	1x NE200510
Mustang / Yak FTR aileron servo	1x NE200512
Battery frame	1x NE220003
Undercarriage	1x NE220004
LiPo battery, 3.7 V / 150 mAh	1x NE220009
Power set	1x NE220010
USB battery charger, 5 V / 500 mA S	1x NE251423

Picture: RTF

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FUTABA TRANSMITTER READY FTR Futaba CODE 2.4GHz INSIDE!

YAK-54 3G FTR RTF 2.4GHz

No. NE2005FTR

YAK-54 3G FTR RTF 2.4GHz
No. NE2005FTR

YAK-54 3G FTR RTB 2.4GHz
No. NE2005RTB

FUTABA Transmitter Ready – FUTABA Code Inside

The Nine Eagles YAK-54 3G FTR RTF is a compact, true-scale power model aircraft fitted with the advanced 3G stabilisation system. The new, revised version is now supplied with a four-channel radio control system with elevator, rudder and aileron controls, and a new, highly detailed colour finish. The YAK-54's fast, direct flying characteristics make it suitable for advanced pilots with prior flying experience. Its compact size and robust EPO foam construction make the YAK-54 an uncomplicated fun model for those brief interludes which are just right for a little high-speed flying fun. Stabilisation system
The integral triple-axis stabilisation system stabilises aileron, rudder and elevator, and supports the pilot during demanding flight manoeuvres and in windy flying conditions. If an optional Futaba FHSS transmitter is used, the stabilisation function can be switched on and off from the transmitter using a fifth channel.

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the **Futaba S-FHSS code**, and are therefore compatible with all Futaba S-FHSS radio control systems (e.g. T6J or T14SG). This means that the model can be flown with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up or making the change.

The YAK-54 is also available in an RTB version (without transmitter), which can simply be bound to an existing Futaba S-FHSS system (1-NE2005RTB).

Set contents No. NE2005RTB
- Model aircraft of robust EPO foam construction
- Power system with miniature motor and anti-crash stop function
- Integral gyro stabilisation system
- LiPo battery, 3.7 V / 150 mAh
- Flight battery charge function in the transmitter
- 2.4 GHz four-channel transmitter, FUTABA Code Inside
- Replacement propeller
- 4 x AA-size dry cell
- Operating instructions

Set contents No. NE2005RTB
- Model aircraft of robust EPO foam construction
- Power system with miniature motor and anti-crash stop function
- Integral gyro stabilisation system
- LiPo battery, 3.7 V / 150 mAh
- USB charger for flight battery
- Replacement propeller
- Operating instructions

Features
The RTF version is supplied complete with a 2.4 GHz radio control system (pre-set to Mode 2, can be set to Modes 1 - 2), LiPo flight battery, flight battery charge function in the transmitter.

Pre-flight check-list
Classification: powered model aircraft
Qualification: Advanced
Flight area: Outdoors, zero to little wind
Flight time: 6 - 8 min.
Charge time: 45 - 90 min (flight battery)
Radio control system LCD screen - four-channel - 2.4 GHz - FUTABA Code Inside
Special feature: gyro stabilisation system
(Values for flight and charge times are approximate, and may vary due to various influences).

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Wingspan approx.	400 mm
Length approx.	360 mm
Scale	01:20
All-up weight approx.	42 g

RC functions
Elevator, Rudder, Aileron, Motor control

Replacement parts

YAK undercarriage	1x NE200505
YAK control surface linkage	1x NE200506
YAK-54 FTR fuselage	1x NE200507
YAK-54 FTR wing	1x NE200508
YAK-54 FTR tail set	1x NE200509
Mustang / YAK FTR charge lead adapter	1x NE200510
YAK-54 FTR propeller	1x NE200511
Mustang / Yak FTR aileron servo	1x NE200512
YAK-54 FTR receiver	1x NE200513
Control surface horns	1x NE220002
Battery frame	1x NE220003
LiPo battery, 3.7 V / 150 mAh	1x NE220009
Power set	1x NE220010
USB battery charger, 5 V / 500 mA S	1x NE251423

Picture: RTF

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FUTABA TRANSMITTER READY FTR Futaba CODE INSIDE 2.4GHz S.BUS

Bellanca 450 3G FTR RTF

No. NE2011

Compact, true-scale power model aircraft fitted with the advanced 3G stabilisation system and RTF set contents, suitable for beginners.

The Nine Eagles **Bellanca 450 3G FTR RTF** is a compact, true-scale power model aircraft fitted with the advanced 3G stabilisation system. With its benign flying characteristics, complete RTF set contents and electronic triple-axis stabilisation, the Nine Eagles Bellanca 450 is an excellent choice for the **beginner**.

The full-size
The full-size aircraft on which the Nine Eagles Bellanca is based is a renowned American high-wing cabin aircraft of lightweight construction.

The model
The Nine Eagles Bellanca is an ideal model for beginners and advanced pilots looking for a compact, **true-scale power model**. The advanced triple-axis stabilisation system ensures that the model has particularly stable, good-natured flying characteristics. The Bellanca's **robust EPO foam construction** and low weight enable the model to shrug off quite „hard landings".

The advanced pilot will appreciate the excellent **scale fidelity** for such a small model. The Bellanca is a great little companion which takes up little space, and can therefore be ready to fly at any time at short notice when a little fun-flying is required.

Stabilisation system
The integral **triple-axis stabilisation system** stabilises aileron, rudder and elevator. During the initial practice flights the system provides effective support to the beginner, ensuring that he maintains secure control of the model even in difficult light-wind conditions. If you use an optional Futaba FHSS transmitter, the stabilisation function can be switched on and off from the transmitter using a fifth channel.

Set contents
- Model aircraft of robust EPO foam construction
- Power unit with miniature geared motor and anti-crash stop function
- JF4 2.4 GHz four-channel transmitter, FUTABA Code Inside (transmitter set to Mode 2, can be converted to Mode 1)
- Flight battery charge function in the transmitter
- Integral 3G flight stabilisation system
- LiPo battery, 3.7 V / 200 mAh
- Undercarriage with wheel spats
- Replacement propeller
- German operating instructions (instructions in various foreign languages can be downloaded from www.robbe.com)

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system supplied in the set conforms to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the **Futaba S-FHSS code**, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. The model can therefore be flown with any high-quality Futaba S-FHSS radio control system – ideal for all **modellers moving up and making the change**.

Features
The set is supplied complete with a robbe 2.4 GHz radio control system (pre-set to Mode 2, can be set to Modes 1-2), LiPo flight battery and flight battery charge function in the transmitter.

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Wingspan approx.	456 mm
Length approx.	365 mm
All-up weight approx.	50 g

RC functions
Elevator, Rudder, Aileron, Motor control

Essential accessories
AA-size dry cell, alkaline AA-R6 4x 8008

Replacement parts
Bellanca 450 3G FTR RTF M2 fuselage 1x NE201101
Mustang P51 FTR control surface horn 1x NE200409
Mustang / YAK FTR charge lead adapter 1x NE200510
Mustang / Yak FTR aileron servo 1x NE200512
Bellanca 450 3G FTR RTF M2 wing 1x NE201102
Bellanca 450 3G FTR RTF M2 tail set 1x NE201103
Bellanca 450 3G FTR RTF M2 undercarriage 1x NE201104
Bellanca 450 3G FTR wing struts 1x NE201105
Bellanca 450 3G FTR RTF control surface linkage 1x NE201106
Bellanca 450 3G FTR RTF M2 propeller set 1x NE201107
Bellanca 450 3G FTR RTF S-FHSS receiver 1x NE201108
Battery frame 1x NE220003
Power set 1x NE220010
LiPo - Akku 3,7 V 200 mAh 1x NE201109

robbe

Edge 540 3G FTR RTF

No. NE2012

EINSTEIGER FORTGESCHRITTENER EXPERTE

Compact, scale aerobatic model with the advanced 3G stabilisation system, FUTABA S-FHSS compatible.

The Nine Eagles Edge 540 3G FTR RTF is a compact, true-scale aerobatic model aircraft fitted with the advanced 3G stabilisation system. The Edge 540 3G's fast, direct flying characteristics make it suitable for advanced pilots with prior flying experience. The powerful brushless motor provides ample reserves of power as required for an aerobatic model. Its compact size and robust EPO foam construction make the Edge 540 3G an uncomplicated fun model for those brief interludes which are just right for a little high-speed flying fun.

The full-size
The full-size machine on which the Nine Eagles Edge 540 is based is a high-performance aerobatic aircraft of American manufacture which has been successful in countless Air Races.

The model
The Nine Eagles Edge 540 is an ideal aeroplane for advanced pilots looking for a small, compact aerobatic model.

Stabilisation system
The integral triple-axis stabilisation system stabilises aileron, rudder and elevator, and supports the pilot during demanding flight manoeuvres and in difficult flying conditions. If an optional Futaba FHSS transmitter is used, the stabilisation function can be switched on and off from the transmitter using a fifth channel.

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. As a result the model can be flown directly with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up and changing direction.

Set contents
- Model aircraft of robust EPO foam construction
- JF4 2.4 GHz four-channel transmitter, FUTABA Code Inside (transmitter set to Mode 2, can be converted to Mode 1)
- Battery charger and mains PSU
- Integral 3G flight stabilisation system
- LiPo battery, 7.4 V / 250 mAh
- Undercarriage with wheel spats
- Replacement propeller
- German operating instructions

(instructions in various foreign languages can be downloaded from www.robbe.com)

Features
The RTF version is supplied complete with a 2.4 GHz radio control system (pre-set to Mode 2, can be set to Modes 1-2), LiPo flight battery, battery charger and mains PSU.

Specification:

Wingspan approx.	430 mm
Length approx.	400 mm
Scale	1:17
All-up weight approx.	78 g

RC functions
Elevator, Rudder, Aileron, Motor control

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

Replacement parts

Mustang P51 FTR control surface horn	1x NE200409
Edge 540 3G FTR RTF fuselage	1x NE201201
Edge 540 3G FTR RTF wing	1x NE201202
Edge 540 3G FTR RTF tail set	1x NE201203
Edge 540 3G FTR RTF undercarriage	1x NE201204
Edge 540 3G FTR RTF motor mount	1x NE201205
Edge 540 3G FTR RTF control surface linkage	1x NE201206
Edge 540 3G FTR RTF BL motor	1x NE201207
Edge 540 3G FTR RTF screw set	1x NE201208
Edge 540 3G FTR RTF S-FHSS receiver	1x NE201209
Edge 540 3G FTR RTF tail servo	1x NE201210
Edge 540 3G FTR RTF aileron servo	1x NE201211
Lipo - Battery 7,4 V 250 mAh 35C	1x NE201212
Edge 540 3G FTR RTF propeller	1x NE201213
Solo Pro 328 A battery charger	1x NE250426
Solo Pro 228 mains PSU	1x NE250429

Illustration depicts an assembled model.

Grob G 120TP Nano-Racer

No. 2598

EINSTEIGER FORTGESCHRITTENER EXPERTE

Maxi-speed at nano-scale

Like the full-size machine and our large Grob G120TP 1700 mm ARF model, this nano-model is extremely fast and fully aerobatic, while its broad speed range is also ideal for realistic flying in the scale style. The model's aerobatic repertoire can be expanded by installing the optional rudder servo and linkage. The aeroplane is based on a one-piece painted foam moulding incorporating fuselage and wings. The wing features a carbon fibre spar for additional strength, making it capable of withstanding extreme loads in racing and aerobatic flying.

Set contents

- Pre-painted EPO foam parts set (fuselage / wing, fin, tailplane, fuselage hatch with cockpit), decals applied
- Painted plastic cowl
- Factory-fitted brushless motor and speed controller
- 5.5 x 4.5" propeller, spinner and driver
- Three factory-fitted servos
- Multi-lingual assembly instructions

Specification:

Wingspan approx.	735 mm
Length approx.	660 mm
Scale	1:14
Total surface area approx.	9 dm²
Wing loading approx.	43,3 g/dm²
All-up weight approx.	390 g

RC functions

Elevator, Aileron, Motor control, Rudder (optional)

Recommended accessories

Seitenruder Upgrade-Kit für Nano	1x 2600

Essential accessories

T6J-R2006GS 2.4 GHz FHSS	1x F4100
LiPo-Akku ROXXY® Evo 3-850 30C	1x 6603
POWER PEAK® A4 EQ-LCD 230 V / 12 V	1x 8560
CT-2 plug + socket	1x 4077
CT2 gold charge lead, 2 mm	1x 8254

Replacement parts

Cowling Grob G 120TP Nano-Racer	1x 25980001
Linkage set Grob G 120TP Nano-Racer	1x 25980002
Spinner Grob G 120TP Nano-Racer	1x 25980003
Motor support set Grob G 120TP	1x 25980004
Canopy Grob G 120TP Nano-	1x 25980005
Decal Grob G 120TP Nano-Racer	1x 25980006
ROXXY® BL Outrunner 2826/09	1x 4952
ROXXY® BL outrunner accessory set D28	1x 4794
ROXXY® BL-Control 745 BEC	1x 8973
8.1 g servo	1x 8975
APC propeller 5.5 x 4.5 Speed	1x 77835545

Illustration depicts an assembled model.

Pilatus PC21 Nano-Racer

No. 2599

EINSTEIGER FORTGESCHRITTENER EXPERTE

Semi-scale model of a fast aerobatic trainer

The PC 21 is a member of the Nano-Racer series, and consists of a painted, one-piece, moulded foam fuselage and wing, reinforced with a carbon fibre spar. The model boasts outstanding flying qualities, and is perfectly ‚at home' at high speed and flying aerobatics. With its robust but lightweight construction the model is fully capable of exploiting its advantages at both ends of the speed spectrum. The set includes a powerful brushless motor with speed controller and three servos, all factory-installed.

Set contents

- Pre-painted EPO foam parts set (fuselage / wing, fin, tailplane, fuselage hatch with cockpit), decals applied
- Painted plastic cowl
- Factory-fitted brushless motor and speed controller
- 5.5 x 4.5“ propeller, spinner and driver
- Three factory-fitted servos
- Multi-lingual assembly instructions

Specification:

Wingspan approx.	622 mm
Length approx.	711 mm
Scale	01:14,6
Total surface area approx.	9 dm²
Wing loading approx.	45,5 g/dm²
All-up weight approx.	410 g

RC functions

Elevator, Aileron, Motor control, Rudder (optional)

Recommended accessories

Seitenruder Upgrade-Kit für Nano	1x 2600

Essential accessories

T6J-R2006GS 2.4 GHz FHSS	1x F4100
LiPo-Akku ROXXY® Evo 3-850 30 C	1x 6603
POWER PEAK® A4 EQ-LCD 230 V / 12 V	1x 8560
CT-2 plug + socket	1x 4077
CT2 gold charge lead, 2 mm	1x 8254

Replacement parts

Cowling Pilatus PC21 Nano-Racer	1x 25990001
Linkage set Pilatus PC21 Nano-Racer	1x 25990002
Spinner Pilatus PC21 Nano-Racer	1x 25990003
Canopy Pilatus PC21 Nano-Racer	1x 25990005
Motor support set Pilatus PC21	1x 25990004
Decal Pilatus PC21 Nano-Racer	1x 25990006
ROXXY® BL Outrunner 2826/09	1x 4952
ROXXY® BL outrunner accessory set D28	1x 4794
ROXXY® BL-Control 745 BEC	1x 8973
8.1 g servo	1x 8975
APC propeller 5.5 x 4.5 Speed	1x 77835545

robbe

ROPULSION® TELEMETRY

robbe EXKLUSIV
POWERED BY JETCAT

Ropulsion Turbine Telemetrie

Turbine RP 100 Telemetrie

No. T0100

Turbine RP 140 Telemetrie

No. T0140

Turbine RP 175 Telemetrie

No. T0175

The new telemetry-capable robbe Ropulsion turbines

robbe Ropulsion telemetry
Superb quality, telemetry and digital S. BUS technology for jet engines

The robbe Ropulsion telemetry turbine series has been developed jointly with the turbine manufacturer Jetcat, which is renowned for its high-quality turbines.
One of the outstanding features of the new robbe Ropulsion turbine series is the integral Futaba S.BUS2 compatible telemetry function.

Telemetry
In addition to the renowned Jetcat quality and performance, robbe Ropulsion telemetry turbines offer telemetry functionality which is exclusive to robbe. The telemetry functions are directly compatible with all robbe/Futaba FASSTest® radio control systems. The wide range of parameters transmitted to the pilot provides full control of the engine.

S.BUS2 compatible
The new robbe Ropulsion turbines will be fully S.BUS2 compatible, and are therefore ideal for integrating into S.BUS2 systems in the model. This integration of the power unit further expands the advantages of S.BUS technology - in particular for high-quality systems.
Only one S.BUS2 connection to the S.BUS2 receiver is required to transfer the control functions and all the telemetry data.
Naturally robbe Ropulsion telemetry turbines are also compatible with conventional receivers (PWM socket), but then without the telemetry function.

Telemetry parameters:
- Fueltank level display
  The contents of the fueltank are monitored constantly, and the remaining capacity is sent to the transmitter in real time in ml. It is also possible to define a minimum value below which an alarm is triggered, e.g. with output via the Futaba transmitter‘s vibration alarm.
- Turbine ‚off‘ functionality
  Important safety function - especially at major flying events with a high level of background noise. The immediate warning of a turbine flame-out, e.g. via the vibration alarm, can gain valuable seconds when the jet has to carry out an emergency landing.
- Fuel consumption
  The telemetry link provides constant information on current fuel consumption
- Fuel quality
  The turbine ECU detects air bubbles in the fuel, which indicate problems in the fuel system, and may result in a turbine flame-out.
- Speed
  In conjunction with the robbe pitot tube (Article 1-T1005) you have information about the model’s actual speed (true airspeed) in km/hr
- Rotational speed
  Real-time display of the engine’s current speed in rpm
- Temperature
  Real-time display of actual turbine temperature in °C
- Pump voltage
  Real-time display of the current pump voltage in V
- Battery voltage
  Real-time display of the actual voltage of the turbine battery in V
- Current drain
  Real-time display of the turbine’s actual current drain in A
- Altimeter
  The ECU’s integral manometer keeps the pilot informed of the model’s current altitude

Specification Ropulsion RP-100 telemetry:
- Diameter: 97 mm
- Length: 245 mm
- Weight: approx. 1080 g
- Thrust: 100 N @ 154,000 rpm
- Temperature: approx. 730°C
- Fuel consumption: approx. 350 ml / min.

Specification Ropulsion RP-140 telemetry:
- Diameter: 112 mm
- Length: 320 mm
- Weight: approx. 1590 g
- Thrust: 142 N @ 125,000 rpm
- Temperature: approx. 710°C
- Fuel consumption: approx. 510 ml / min.

Specification Ropulsion RP-175 telemetry:
- Diameter: 112mm
- Length: 330 mm
- Weight: approx. 1595 g
- Thrust: 175 N @ 125,000 rpm
- Temperature: approx. 730°C
- Fuel consumption: approx. 610 ml / min.

Set contents
- Robbe Ropulsion RP 100 telemetry turbine
- ECU
- GSU
- Fuel pump
- Fuel filter
- Fuel tubing
- Cable set
- Turbine battery (LiPo ROXXY® Evo 3-2600 30C)
- I/0 mini-board
- Operating instructions in German

• Turbine status
  This menu field provides constant and detailed information on the turbine's operational states (e.g. start process or shut-down process)

All transferred telemetry parameters feature an alarm function which allows the user to define critical values beyond which an alarm is generated, optionally via speech output and / or vibration and / or display.

Ropulsion quality

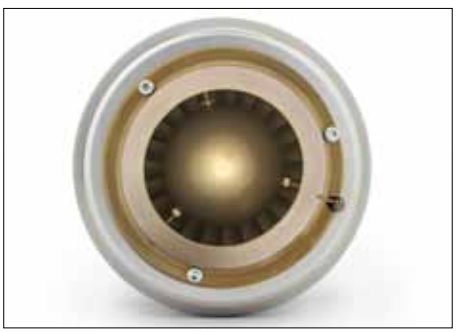
robbe Ropulsion telemetry turbines are designed and manufactured in accordance with the latest findings. All components such as the turbine wheel, guide vane carrier and hybrid ballraces are Made in Germany or Switzerland. The turbines can be operated with kerosene, petroleum and Aral Ultimate (each with syth. Turbine oil as AeroShell 500). The turbine control system and software are in-house developments, and are perfectly matched to the turbine components. The turbine control system is equipped with the latest micro-processors.

- Single-stage radial compressor
- Single-stage turbine stage
- Fuel mixture vaporiser ‚sticks'
- Integral kerosene start system
- Integrated temperature sensor
- Critical combustion chamber components made of Inconel®

The new generation of robbe Ropulsion telemetry turbines enormously reduces the complexity of wiring and fuel lines. They are supplied with a new, fully digital S.BUS ECU. All valves are completely integrated inside the turbine housing. This means that only one fuel line connection is required between the pump and the turbine!
The electrical connection between the turbine and the ECU requires just one PowerBus lead. The ECU weighs just 26 g, and the only connections to it are the receiver (1-2 channels), the fuel pump and the power supply battery. The 3S / 2600 mAh / 30C LiPo power supply battery is supplied in the set. This pack not only powers the ECU and the fuel pump, but also all the optional components which can be connected to the Bus system, such as a second pump for smoke fluid and / or an LCU (lighting control unit). If an additional bus pump is used, this can be configured as a smoke pump. In this case the smoke pump flow rate can be controlled directly via the ECU / GSU. Alternatively the ECU can be set up for use with a 3S LiFePO battery or a NiCad pack with six to eight cells. The ECU features an accurate integral air pressure and temperature sensor which is used to fine-tune the turbine's control system intelligently in accordance with fluctuating environmental conditions. There is also no need to adjust the initial pump voltage, as this is carried out fully automatically by the ECU. The turbine's temperature sensor is fitted internally, but is still easy to replace if necessary.

robbe Ropulsion service task

With robbe Ropulsion you can minimise your jet's down-time. When maintenance is required, all robbe Ropulsion Telemetry Series turbines are processed by the robbe Service Centre in a maximum of ten working days, and then returned to the customer.



Turbine RP 100 Telemetrie

RP Ground Support Unit Mini

No. T1004

The robbe Ropulsion mini-GSU for direct installation in the model.
The optional robbe Ropulsion mini-GSU is a miniaturised Ground Support Unit (GSU). The mini-GSU is so small and light (66 x 34 x 16.5 mm, 32 g) that it can simply be left in the model if necessary.
The two-line backlit alpha-numeric LCD screen and the ten function buttons provide the same adjustment facilities as the „full-size“ GSU. The unit is connected directly to the ECU or the LED I/O interface by means of a six-pin ribbon cable connector.

RP airspeed sensor

No. T1005

Measure your model‘s „real“ speed (True Airspeed)
Our Airspeed Sensor enables you to measure the actual speed (True Airspeed) attained by your jet - in any flight attitude. Use the telemetry facilities of your robbe / Futaba radio control system to establish maximum speed (limit > 600 km/hr) and / or minimum speed (to avoid stalling on the landing approach).

The optional airspeed meter consists of a pitot tube and an accurate differential pressure sensor. The ECU calculates the model‘s actual airspeed from the measured differential pressure and the air temperature.

If the Airspeed Sensor is not connected, the ECU works constantly in what is known as „thrust control“ mode. In this normal operating mode the pilot defines or sets the turbine thrust directly using the throttle stick . If the Airspeed Sensor is connected, the ECU can also switch to what is known as „speed control“ mode (= regulated airspeed). In this mode the turbine thrust is automatically controlled by the ECU, so that the model accelerates to and maintains a pre-defined nominal airspeed.

The airspeed information can then be used by the ECU for various functions: measurement / storage of the maximum and average airspeed. Measurement of the distance flown in km. Automatic limiting of the model‘s maximum permitted airspeed. Airspeed regulation relative to throttle stick position (= „speed control“ mode). Maintenance of the current airspeed (= „hold speed“ mode). The pilot switches between the various modes at the transmitter using a three-position switch and a second channel.

FOD guard, RP-100 telemetry

No. T1006

FOD guard, RP-140/175 telemetry

No. T1007

Protect your valuable robbe Ropulsion turbine from foreign bodies!
With the FOD guard made specially for our turbines you can prevent foreign bodies entering your engine and causing damage.

Galaxy Visitor I RTF 2.4 GHz Mode 2 No. NE2525

Low-cost mini-quadrocopter with on-board video / stills camera

The Galaxy Visitor I is a low-cost mini-quadrocopter which is an ideal choice for the beginner. The Dual Rate function enables the pilot to choose how the model responds to transmitter commands, so that its response matches his skill level. Experienced pilots who have already mastered the model can fly interesting 3D manoeuvres using the Flip (somersault) function.
The special attraction of the Galaxy Visitor I is its integral video and stills camera, enabling it to record high-quality moving and still images on an SD card while the model is flying. After the flight the images can be viewed on a PC with the help of the USB adapter included in the set.
The complete set contents, including futuristic RC transmitter, all essential accessories, and replacement rotor blades make the Galaxy Visitor I the ideal quadcopter for the newcomer.

Pre-flight checklist
Classification: mini-quadrocopter
Qualification: beginner
Flight area: outdoor, flat calm to light wind speeds
Flight-time: 6 - 7 min.
Charge time: 45 - 60 min (flight battery)
Radio: 4-channel - 2.4 GHz, Mode 2
Special features: on-board video and stills camera, flip function
(values for flight and charge times are approximate, and may vary due to external influences)

Set contents
- Mini-quadrocopter with video and still camera function, completely assembled, set up, ready to fly
- LiPo battery, 3.7 V / 250 mAh with polarised connector
- USB battery charger
- 2.4 GHz four-channel transmitter, Mode 2 configuration
- 4 AAA-size dry cells
- SD memory card, 2 GB
- USB read adapter for memory card
- 4 replacement propellers
- Binding plug
- Screwdriver
- Comprehensive operating and flying instructions

Note: the colours of the housing may differ from those shown in the illustration.

Specification:

Main rotor diameter approx.	56 mm
Length approx.	129 mm
All-up weight approx.	36 g
Camera resolution:	1280 x 720 pixels

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent, Auxiliary working systems

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Nine Eagles
GALAXY
VISITOR 2

Galaxy Visitor II FTR RTF 2.4GHz

Galaxy Visitor II FTR RTF 2.4GHz M1 **No. NE2528M1**
Galaxy Visitor II FTR RTF 2.4GHz M2 **No. NE2528FTR**

High-End mini-quadrocopter with numerous auxiliary functions

The GALAXY VISITOR 2 is a **mini-quadrocopter** of the latest generation with a stylish look. Its switchable flying characteristics make it equally suitable for beginners and advanced pilots.
Equipped with a 2.4 GHz radio control system, a nine-way stabilisation system and advanced special functions, the GALAXY VISITOR 2 is far in advance of other mini-quadrocopters. A miniature still and video camera (1-NE252814) is available as an option. With a resolution of 1280 x 720 pixels it provides even more mini-quadrocopter fun, with unprecedented insights and perspectives.

The model is also a good choice for flying outdoors in light winds – **the ideal mini-quadrocopter for indoors and out.**

Set contents
- High-End mini-quadrocopter, completely factory-assembled and set up, ready to fly
- LiPo battery, 3.7 V / 350 mAh with polarised connector
- USB battery charger
- 2.4 GHz four-channel transmitter, Mode 2 (mode change not possible)
- 4 AA-size dry cells
- 4 replacement propellers
- Propeller guard rings
- Screwdriver
- Comprehensive operating and flying instructions

GALAXY VISITOR 2 videos on the robbe Youtube channel: In action, functions, settings and more …

Note:
Some of the illustrations show the model with the optional camera installed. This camera set with 2 GB Micro-SD memory card and USB card reader is available under Order No. NE252814.

Specification:

Main rotor diameter approx.	56 mm
Length approx.	102 mm
All-up weight approx.	43 g
Spacing between bearer arms	86 mm

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent, Auxiliary working systems

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Nine Eagles®
GALAXY VISITOR 2

Galaxy Visitor II FTR RTF 2.4GHz

The **highly developed nine-way gyro and stabilising system** supplied as standard will delight the beginner and advanced pilot in equal measure. It features a total of nine sensors for optimum stabilisation: triple-axis gyro + triple-axis accelerometer + triple-axis field strength sensor.
Two flight modes can be selected at the transmitter. In **Beginner mode** the Galaxy Visitor 2 is extremely stable, and responds in a docile manner to flight commands - ideal for learning the skill of controlling a quadrocopter. In **Agility mode** the model's agility and flying characteristics are faster, more direct and more accurate; the advanced pilot will never find the model boring in this mode.

If you enjoy a splash of colour, you can fit the optional interchangeable housing parts in various colours to give your GALAXY VISITOR 2 an individual accent. The navigation lights fitted as standard supply cool lighting effects, and help in orientating the model.

The GALAXY VISITOR 2 includes the following advanced special functions:

„Headless Flight"-function
For normal control of a radio-controlled helicopter the direction of control is always from the point of view of the model, i.e. forward, back, right and left refer to the model's direction of flight, or the pilot's view „in the model". The drawback to this is the necessity to re-think your commands when the model is flying towards you. Right and left for the pilot „in the model" are now exactly the opposite of those for the pilot holding the RC system transmitter. This „conventional flight mode" is difficult to master, especially for the beginner who is just making a start. In the case of a quadrocopter there is an additional difficulty: the symmetrical overall shape makes it slightly more difficult to pick up where ‚front' and ‚back' are on the model. For this reason the GALAXY VISITOR 2 includes an „Intelligent Control Mode". When the model is operated in this control mode, all directions refer to the pilot holding the RC system transmitter. This means that the model always flies towards the pilot if he moves the pitch-axis stick back (towards himself), and always away from the pilot if the pitch-axis stick is moved forward. Right and left are now always exactly the same with reference to the pilot. The direction in which the actual front of the quadrocopter is pointing is not relevant.

„Auto-Return" function
The effect of the Auto-Return function is to cause the model to return to the pilot automatically and immediately, regardless of its attitude. Simply press the AUX 1 button on the transmitter to trigger the Auto-Return function. It makes no difference which flight mode is currently selected.

„Auto Brake" function
The GALAXY VISITOR 2 has an automatic brake function. If you abruptly release the roll / pitch-axis stick while the model is flying forward, its forward speed is automatically reduced until it comes to a hover. This function can be useful in avoiding collisions with obstacles.

Futaba Transmitter Ready (FTR)
The GALAXY VISITOR 2's 2.4 GHz radio control system operates according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the **Futaba S-FHSS code**, and are therefore compatible with Futaba S-FHSS radio control systems. As a result the GALAXY VISITOR 2 can also be flown with any high-quality Futaba S-FHSS radio control system – ideal for all modellers moving up and changing over.

Nine Eagles®
RC
HOBBY FLIGHT
SOLOPRO 210 V5

Draco V5 RTF

No. NE2507V5

Visually and technical revised version of the popular beginners‘ helicopter

The Draco V5 RTF is an ideal trainer helicopter for the beginner to model flying.

The flying characteristics of the Draco V5 are designed with the express emphasis on inherent stability at the hover, in order to make it as easy as possible for the complete beginner to learn the basics of model helicopter flying using a fully featured four-channel radio control system („pitch-axis“, „roll“, „yaw“ and „climb / descent“). As a further aid to initial practice, the transmitter can be set to „docile“ for the first few flights. After a few practice flights the pilot can then switch to „agile“, which allows him to develop further flying skills.

With its low weight and ultra-robust fuselage fairing this trainer is extremely well protected against crash-damage, which minimises the need for replacement parts.

Features
The Draco V5 is fully equipped with a 2.4 GHz radio control system (can be set to Mode 1 or Mode 2), LiPo flight battery and integral charge function in the transmitter.

Pre-flight check-list
Classification: co-axial rotor helicopter
Qualification: beginner
Flight area: indoors
Flight time: 7 - 8 min.
Charge time: 45 - 60 min (flight battery)
Radio control system: LCD screen - four channels - 2.4 GHz

(stated values for flight and charge times are approximate, and may vary according to various influences)

Set contents
- Co-axial helicopter, completely factory-assembled and set up, ready to fly
- LiPo flight battery, 3.7 V / 110 mAh
- Flight battery charge function in transmitter
- 2.4 GHz LCD transmitter set to Mode 2, can be converted to Mode 1
- 4x dry cells for transmitter
- Operating instructions in German

(instructions in various foreign languages can be downloaded from: www.robbe.com)

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	190 mm
Length approx.	215 mm
All-up weight approx.	30 g

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Nine Eagles
SOLOPRO 232
NOTHING FLIES LIKE NINE EAGLES
232
RC HOBBY

Nine Eagles
SOLOPRO 232
NOTHING FLIES LIKE NINE EAGLES
232
RC HOBBY

Solo Pro 232 Nightflight RTF FTR No. NE2527FTR

FUTABA Transmitter Ready – FUTABA Code Inside

The Solo Pro 232 is **completely equipped** with an innovative 2.4 GHz LCD radio control system, LiPo battery, mains battery charger, video and still camera unit with HD resolution (1280 x 720 pixels), 2 GB Micro-SD memory card and USB reader adapter for the memory card.

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system of the SOLO PRO 232 operates according to the **FTR standard (Futaba Transmitter Ready)**. This means that the transmitter and receiver use **Futaba S-FHSS code**, and are therefore compatible with Futaba S-FHSS radio control systems. As a result the model can also be flown directly using any high-quality Futaba S-FHSS radio control system - ideal for modellers moving up and changing stream.

Pre-flight check-list :
Classification: large single-rotor helicopter with fully faired fuselage, lighting system and camera unit
Qualification: advanced beginner
Flight area: indoors / outdoors, little to no wind
Flight time: 6 - 7 min. charge time: 60 - 70 min. (flight battery)
Radio control system: LCD screen - four channels - 2.4 GHz - FUTABA Code Inside
(values for flight and charge times are approximate, and may vary due to various influences).

Set contents
- Single-rotor model helicopter with video and still photo function, completely factory-assembled and set up, ready to fly
- LED-illuminated main rotor blades and tail stabiliser
- Two-blade tail rotor with electric motor, rigid drive shaft and angle gearbox
- Multi-colour, fully faired plastic fuselage
- Electric main drive motor
- LiPo battery, 7.4 V / 1000 mAh
- Two 3V CR2016 button cells for rotor blade lights
- Battery charger and mains PSU
- Compact electronic control unit
- JF4 Pro 2.4 GHz S-FHSS LCD transmitter set to Mode 2 (mode change not possible)
- Video and still photo unit with HD resolution (1280 x 720 pixels)
- 2 GB Micro-SD memory card
- USB reader adapter for memory card
- Comprehensive operating and flying instructions

Specification:

Main rotor diameter approx.	380 mm
Length approx.	420 mm
All-up weight approx.	276 g
Camera resolution:	
1280 x 720 pixels (High Definition)	

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent, Auxiliary working systems, retracting tricycle undercarriage

Essential accessories
AA-size dry cell, alkaline AA-R6 4x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Nine Eagles

Solo Pro 137 BO105 Military SR FTR RTF No. NE3526

The **Solo Pro 137 BO105 Military SR FTR RTF** helicopter is a compact, extremely realistic model of the familiar BO105 multi-role helicopter. The **plastic scale fuselage** is particularly well detailed, ensuring that the model looks very realistic in the air. A magnetic cabin latch ensures fast, easy battery swaps. The **single-rotor** design is ideal for the advanced beginner, and offers extremely stable flying characteristics. A **triple-axis gyro system** provides support to the pilot during those first few practice flights. The helicopter can be flown indoors and also outdoors in flat-calm conditions or light breezes.

The full-size
The B0 105 is probably the best-known and most widely used multi-role helicopter ever developed and manufactured in Germany. It is employed by the police and the armed forces for civilian protection and disaster management, and is also the choice of many civilian operators. This version depicts the BO 105 in a military version used for observation tasks.

The model
The single-rotor version of the new model has been developed in order to give the more advanced beginner to model helicopter flying the chance to enjoy scale flying. The model's benign flying characteristics make it a simple matter to move up from the co-axial helicopter to the single-rotor type.

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. The model can therefore be flown using any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up or making the change.

Set contents
- Factory-assembled scale model helicopter, set up ready to fly
- Detailed scale plastic fuselage with magnetic canopy latch for easy battery swap
- Single-rotor head with flybar
- Miniature motors for primary and tail rotor drive systems
- LiPo battery, 3.7 V / 450 mAh
- USB battery charger
- Gyro system
- J4 2.4 GHz LCD transmitter set to mode 2; can be converted to mode 1
- Replacement tail rotor
- 4 x dry cells for transmitter
- Operating instructions in German

(instructions in various foreign languages can be downloaded from: www.robbe.com)

Features
The RTF version of the model includes a J4 2.4 GHz LCD transmitter in Mode 2 form (can be set to Mode 1), LiPo flight battery and USB battery charger.
No additional accessories are required.

Specification:

Main rotor diameter approx.	254 mm
Tail rotor diameter approx.	46 mm
Length approx.	235 mm
Height approx.	88 mm
All-up weight approx.	69 g
Scale	1:50

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Nine Eagles

Solo Pro 135 BO105 Military CP FTR RTF No. NE3527

The **Solo Pro 135 BO105 Military CP FTR RTF** helicopter is a compact model of the renowned BO105 multi-role helicopter produced to a high scale standard. The **plastic scale fuselage** is particularly well detailed, ensuring that the model looks very realistic in the air. The CP version is fitted with a sophisticated and convincing **four-blade rotor head with collective pitch** which underlines its scale aspirations. A magnetic cabin latch ensures fast, easy battery swaps.

The model is very agile in the air, and the **brushless main motor** provides ample reserves of power. The three high-quality 1.9 g servos are factory-installed and provide a sensation of accurate control. The integral **triple-axis gyro system** makes it easy to move up from a single-rotor helicopter to a model with collective pitch control. This helicopter is so inherently stable that the pilot will very quickly feel at home flying it.

The size of this version of the BO 105 makes it ideal for flying indoors, but it can also be flown outdoors in flat calm conditions or light breezes. <

The full-size
The B0 105 is probably the best-known and most widely used multi-role helicopter ever developed and manufactured in Germany. It is employed by the police and the armed forces for civilian protection and disaster management, and is also the choice of many civilian operators. This version depicts the BO 105 in a military version used for observation tasks.

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. As a result the model can be flown directly with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up and changing direction.

Set contents
- Factory-assembled scale model helicopter, set up ready to fly
- Detailed scale plastic fuselage with magnetic canopy latch for easy battery swap
- Four-blade rotor head
- Brushless main motor
- 10 A brushless speed controller
- Three 1.9 g digital servos
- LiPo battery, 3.7 V / 600 mAh
- Battery charger with plug-type mains PSU
- Triple-axis gyro system
- Replacement tail rotor
- J6 Pro pre-programmed 2.4 GHz six-channel computer radio control system
- Operating instructions in German

(instructions in various foreign languages can be downloaded from www.robbe.com)

Features
The RTF version is supplied complete with J6 Pro 2.4 GHz six-channel computer radio control system, LiPo flight battery and battery charger with plug-type mains PSU.>

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	245 mm
Tail rotor diameter approx.	56 mm
Length approx.	236 mm
Height approx.	85 mm
All-up weight approx.	89 g
Scale	1:50

RC functions
Pitch-axis, Roll-axis, Yaw, Collective pitch, Motor control

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Nine Eagles
SOLOPRO 290

Solo Pro 290 Lama FTR RTF 2.4 GHz

Solo Pro 290 Lama FTR RTF 2.4 GHz No. NE3516
Solo Pro 290 Lama FTR RTB No. NE3516RTB

FUTABA Transmitter Ready – FUTABA Code Inside

The Solo Pro 290 is a finely detailed replica of the French SA-315 Lama multi-role helicopter. A characteristic feature of this helicopter is the distinctive lattice frame, which our model also reproduces realistically.
The Solo Pro 290 features a metal-reinforced injection-moulded tubular lattice-work frame, together with many scale details such as fueltank and dummy turbine, struts and LED lighting system. The canopy is moulded in clear, dark-tinted plastic. Like the full-size machine, our model is fitted with a three-blade rotor head.
The model features collective pitch, and is aimed at the advanced pilot who already has experience flying this type of model. The Solo Pro 290 is capable of aerobatics thanks to its potent power system.

Pre-flight checklist
Classification: scale helicopter with collective pitch
Qualification: intermediate to advanced heli-pilots
Flight area: outdoor up to medium wind speeds
Flight time: 6 - 7 min.
Charge time: 45 - 60 min (flight battery)
Gyro: triple-axis gyro system
radio: LCD screen - six channels - 2.4 GHz - FUTABA Code Inside
Special feature: complete, ready-to-fly set with computer transmitter, battery and charging system
(values for flight and charge times may vary due to external influences)

Set contents No. NE3516
- Scale helicopter, fully assembled and set up, ready to fly
- Detailed, multi-colour scale fuselage with metal reinforced tubular tail boom
- 3-blade rotor head
- Brushless main drive motor
- LiPo battery, 11.1 V / 1100 mAh
- Battery charger with plug-type mains PSU
- Triple-axis gyro system>/li>
- J6 Pro 2.4 GHz six-channel computer radio
- Operating instructions

Set contents No. NE3516RTB
- Scale helicopter, fully assembled and set up, ready to fly
- Detailed, multi-colour scale fuselage with metal reinforced tubular tail boom
- 3-blade rotor head
- Brushless main drive motor
- LiPo battery, 11.1 V / 1100 mAh
- Battery charger with mains PSU
- Triple-axis gyro system>/li>
- Operating instructions

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

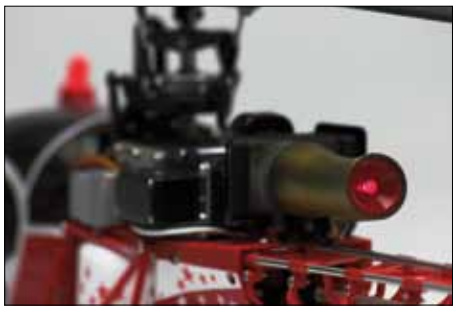
Main rotor diameter approx.	450 mm
Tail rotor diameter approx.	120 mm
Length approx.	456 mm
Height approx.	170 mm
All-up weight approx.	340 g
Scale	01:23

RC functions
Pitch-axis, Roll-axis, Tail rotor, Collective pitch, Motor control

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.



Nine Eagles
SOLOPRO 229

POLIZEI

SOLOPRO 229

Solo Pro 229 EC145

Solo Pro 229 EC145 POLIZEI FTR RTB No. NE3524RTB
Solo Pro 229 EC145 Black FTR RTB No. NE3525RTB

4-blade helicopter with detailed scale canopy

With a rotor diameter of almost 40 cm, the latest **scale variant of the EC 145**, known as the **Solo Pro 229**, is a genuine eye-catcher. Numerous external fittings and small parts attached to the finely detailed injection-moulded plastic fuselage complete the outstanding scale impression of the Nine Eagles EC 145. Multiple LEDs on the fuselage and fin make it a very special experience to fly this helicopter at dusk. With its **FUTABA S-FHSS transmission system**, **effective stabilising gyro** and high-quality **digital servos**, the EC 145 is also suitable for pilots who are still learning the art of flying model helicopters with collective pitch control. In this version the model is finished in the colour scheme of the Hessen police flying squad.

Officially licensed product by EUROCOPTER / EADS

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system of the Solo Pro 229 EC145 operates according to the **FTR standard (Futaba Transmitter Ready)**. This means that the transmitter and receiver operate using the **Futaba S-FHSS code**, and are therefore compatible with Futaba S-FHSS radio control systems. As a result the model can also be flown directly with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up and changing stream.

Set contents No. NE3524RTB
- Highly detailed scale model helicopter, completely assembled and set up, ready to fly
- Multi-coloured, detailed scale fuselage with numerous external fittings
- 4-blade rotor head
- Brushless motors for main and tail rotors
- LiPo battery, 11.1 V / 800 mAh, 25C
- Triple-axis gyro system
- FUTABA S-FHSS receiving system
- 3 x 8g digital servos
- Replacement tail rotor blade
- Battery charger and mains PSU
- Operating instructions

Set contents No. NE3525RTB
Highly detailed scale model helicopter, completely assembled and set up, ready to fly
- Multi-coloured, detailed scale fuselage with numerous external fittings
- 4-blade rotor head
- Brushless motors for main and tail rotors
- LiPo battery, 11.1 V / 800 mAh, 25C
- Triple-axis gyro system
- FUTABA S-FHSS receiving system
- 3 x 8g digital servos
- Replacement tail rotor blade
- Battery charger and mains PSU
- Operating instructions

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	396 mm
Tail rotor diameter approx.	92 mm
Length approx.	430 mm
Height approx.	150 mm
All-up weight approx.	462 g
Scale	01:28

RC functions
Pitch-axis, Roll-axis, Tail rotor, Collective pitch, Motor control

Essential accessories
T-8J - R2008SB 2.4 GHz FHSS/S-FHSS
1x F4108

A complete list of recommended accessories is included in the technical documentation supplied with the model.

BLUE ARROW
STARTER

Blue Arrow Starter RTF

No. S2539

Robust co-axial helicopter for beginners, in a comprehensive set with transport case

The Blue Arrow Starter is a co-axial helicopter which is specifically designed for the complete beginner to model helicopter flying. It combines robust, low-maintenance mechanics, with the look of the robbe Blue Arrow series, with comprehensive set contents designed with the beginner in mind.

The ideal first model with four-channel control

The Blue Arrow Starter‘s extreme inherent stability and superb flying characteristics make it easy for the complete beginner to learn the basic skills of model helicopter flying with a fully featured four-channel system: „pitch-axis“, „roll“, „yaw“ and „climb / descent“. Since the model is so stable, most piloting errors do not end in disaster. Its low weight and strong design minimise the need for replacement parts - even after a „hard landing“. The facility to switch the radio control system from „docile“ to „agile“ provides additional support to the beginner during those first few flights.

High-quality set contents

The Blue Arrow Starter set‘s comprehensive contents leave nothing to chance. The high-quality 2.4 GHz radio control system can easily be converted from Mode 1 to Mode 2, and features two control settings as a further aid to the beginner. Instead of the usual single flight battery, the model is supplied with two packs to enable the new pilot to indulge in extended practice sessions. Swift charging is ensured by the double-output charger and 230 V mains PSU, which is capable of charging both flight batteries simultaneously. The complete set is rounded off by a screwdriver and a set of dry cells for the transmitter. Everything packaged in a padded transport case.

Set contents

- Robust co-axial helicopter specially designed for beginners
- Model is fully assembled and set up, ready to fly
- LED-illuminated canopy with the robbe Blue Arrow look
- 2 x LiPo flight battery, 3.7 V / 110 mAh
- Double battery charger with 230 V plug-type mains PSU
- 2.4 GHz LCD transmitter set to Mode 2, can be converted to Mode 1
- 4 x dry cells for transmitter
- High-quality transport case with foam inserts for safe transport of model, transmitter and accessories
- Operating instruction in German

(instructions in various foreign languages can be downloaded from: www.robbe.com)

EINSTEIGER FORTGESCHRITTENER EXPERTE

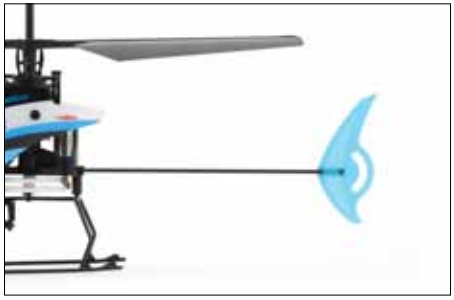
Specification:

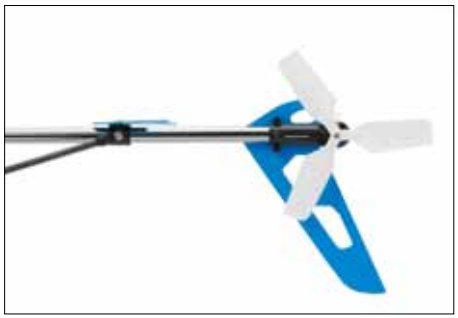
Main rotor diameter approx.	190 mm
Length approx.	210 mm
All-up weight approx.	30 g

RC functions

Pitch-axis, Roll-axis, Yaw, Climb/descent

A complete list of recommended accessories is included in the technical documentation supplied with the model.





Blue Arrow XL 490

No. S2542

Blue Arrow XL 490 – the beginner‘s helicopter with XL presence!

The **robbe Blue Arrow XL 490** is an unusually large co-axial model helicopter for beginners. It offers the same extremely stable flying characteristics as a smaller beginner‘s helicopter, but with a length of 680 mm and a rotor diameter of 490 mm it has the appearance of a „full-size“ machine. This makes it possible for the beginner to move directly from the Blue Arrow XL 490 to a 450-class helicopter.

With its substantial size and high-performance power system, based on two 380-size electric motors and an 11.1 V LiPo battery, the Blue Arrow XL 490 is an excellent choice for flying outdoors, and can be flown even in light breezes without problem. The size and powerful motors also contribute to the model‘s smooth, stable flying characteristics. This makes the Blue Arrow XL 490 an ideal model for all beginners and advanced beginners who wish to continue practising in the open air.

Like expert-class helicopters, the Blue Arrow XL is controlled using four channels, with the functions „yaw“, „pitch-axis“, „roll“ and „climb / descent“. The beginner can therefore practise the basic skills of model helicopter control efficiently before making the step up to more advanced models.

The construction of the Blue Arrow XL 490, based on a GRP chassis, is robust enough to survive the occasional „hard landing“, while the efficient robbe replacement parts system helps to get the model back into the air quickly if an accident should occur.

Set contents

- Large co-axial model helicopter, completely assembled and set up, ready to fly
- Aluminium tail boom with CFRP tube braces
- LED lighting at the tail
- GRP side frames
- Multi-colour plastic canopy with the Blue Arrow look
- Two 380-size brushed motors
- LiPo battery: 11.1 V / 1600 mAh
- 230 V mains battery charger
- Integral electronic control unit and servos, speed controllers, receiver, gyro
- 2.4 GHz four-channel transmitter with simple stick mode change (Mode 2 or 1)
- Comprehensive operating and flying instructions

(instructions in various foreign languages can be downloaded from www.robbe.com)

The comprehensive set contents include AA-size dry cells for the transmitter as well as everything required to get the model in the air, including the 11.1 V LiPo flight battery and matching 230 V mains battery charger. The 2.4 GHz four-channel radio control system is easy to convert from Mode 2 to Mode 1, without tools of any kind.

Now you can learn to fly a model helicopter outdoors without problem - with the Blue Arrow XL 490.

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	490 mm
Tail rotor diameter approx.	110 mm
Length approx.	680 mm
Height approx.	305 mm
All-up weight approx.	600 g

RC functions

Yaw, Pitch-axis, Roll-axis, Climb/descent

Essential accessories

AA-size dry cell, alkaline AA-R6	4x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

ARROW PLUS TRAINER
EVO
BLACK BULLET
robbe
www.robbe.com

EVO
ARROW PLUS TRAINER

Arrow Plus Trainer Black Bullet S-FHSS No. S2538

Ideal single-rotor practice helicopter for advanced beginners, with LED lighting system.

The **robbe Arrow Plus Trainer Black Bullet** is a perfect trainer helicopter for pilots moving up from a co-ax model to a single-rotor type. The cool **„Black Bullet" looks** are emphasised by the **LED lights** fitted to the main rotor blades and tail stabiliser, providing impressive lighting effects when **night-flying**. Initial flying experience with a co-axial helicopter is recommended.

The robbe Arrow Plus Trainer Black Bullet is a **fully featured 250-size model helicopter** which is also very suitable for flying outdoors. The model's **flying characteristics** are extremely stable, and the **high performance** of the motors also provides the power and direct response required for flying outdoors in light breezes. The helicopter's flying characteristics at the hover, combined with direct response and agile controls, provide a **convincing sensation of flying a real helicopter**.

Adjustments

The model's flying characteristics can be adjusted to suit the pilot's flying style and skill by means of two mechanical adjustment facilities involving the swashplate linkage. The adjustments range from docile and extremely stable to direct and agile.

Mechanics

The tail rotor linkage with two-blade tail rotor, rigid drive shaft and angle gearbox has been technically revised and upgraded. Numerous black anodised metal parts ensure a robust, precise mechanical assembly.

Features

The complete high-quality set includes a robbe JF5 Pro computer transmitter with simple mode change (1 or 2), 7.4 V / 1000 mAh LiPo flight battery and charger with plug-type mains PSU.

Set contents

- Single-rotor helicopter in „Black Bullet" night-flying scheme, completely factory-assembled, set up ready to fly
- Main rotor blades and tail stabiliser with LED lights
- Two-blade tail rotor with electric drive motor, rigid drive shaft and angle gearbox (technically revised version)
- Large number of black anodised metal parts
- Electric primary drive motor
- 7.4 V / 1000 mAh LiPo battery
- Two CR2016 3 V button cells for rotor blade lights
- Battery charger with plug-type mains PSU
- Compact electronic control unit
- JF5 Pro 2.4 GHz S-FHSS LCD transmitter with simple stick mode change (1 or 2)
- German operating instructions

(instructions in other languages can be downloaded from www.robbe.com)

Futaba Transmitter Ready (FTR)

The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are compatible with Futaba S-FHSS radio control systems. The model can therefore also be flown with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up or making the change.

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	385 mm
Tail rotor diameter approx.	95 mm
Length approx.	415 mm
Height approx.	150 mm
All-up weight approx.	265 g

RC functions

Pitch-axis, Roll-axis, Yaw, Climb/descent

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

robbe BLUE ARROW
TRAINER CP

TRAINER

Blue Arrow Trainer CP S-FHSS RTB No. S2537

Robust 3D trainer helicopter with S-FHSS receiver and metal-geared servos

The robbe **Blue Arrow Trainer CP** is an ideal**3D trainer helicopter with collective pitch control**.
The model's ultra-robust mechanical system makes it a superb choice for pilots moving up to 3D helicopter flying. The Trainer CP is ideal for all pilots who already have adequate experience in flying single-rotor model helicopters, and are looking forward to trying a model with collective pitch control. The accurate collective pitch control system in conjunction with high-quality metal-geared servos makes the Trainer CP fully **capable of 3D aerobatics**. Its electronic new-generation **six-axis gyro system** supports the pilot effectively as he learns the art of flying a collective pitch helicopter. The gain (sensitivity) of the gyro system is adjustable, and can be fine-tuned to suit the pilot's preference and skill level. The mechanical system is of extremely robust construction, and is capable of withstanding the occasional „hard" landing. One special feature is the tail rotor motor, which is installed in the axial orientation for enhanced mechanical strength.

Move up to 3D helicopter flying with the robbe Blue Arrow Trainer CP.
The Blue Arrow Trainer CP is supplied without RC system transmitter in what is known as an **FTR version (Futaba Transmitter Ready)**.

Set contents
- BLUE ARROW Trainer CP S-FHSS RTB
- Tool set
- Operating instructions

The description ‚Futaba Transmitter Ready' refers to models in the robbe fixed-wing and helicopter range whose standard receiver operates with the **Futaba S-FHSS code**, and can therefore easily be bound to any Futaba transmitter which can be set to S-FHSS mode.

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	462 mm
Tail rotor diameter approx.	113 mm
Length approx.	440 mm
All-up weight approx.	420 g

RC functions
Pitch-axis, Roll-axis, Collective pitch, Tail rotor, Motor control

Essential accessories
T-8J - R2008SB 2.4 GHz FHSS/S-FHSS 1x F4108
LiPo-Akku ROXXY® Evo 3-1000 30C GO35 1x 6605GO35
POWER PEAK® B7 EQ-BID 12 / 230V 1x 8566
GO3.5 gold charge lead, 3.5 mm 1x 8256
General Link Modul S-FHSS 2.4 GHz 1x NE480193

A complete list of recommended accessories is included in the technical documentation supplied with the model.

120 CP
BLUE ARROW
robbe

robbe
BLUE ARROW
120 CP

Blue Arrow CP120 S-FHSS RTB

No. S2540

120-class 3D aerobatic helicopter with superb flying characteristics for the demanding 3D pilot.

The Blue Arrow CP120 is a 120-class 3D aerobatic helicopter.

Its outstandingly **accurate 3D flying characteristics** will satisfy even the most demanding 3D pilot. This makes it an excellent choice for pilots who have gained plenty of experience flying model helicopters with collective pitch control, and wish to take the bold step of trying 3D aerobatics. The compact dimensions of 120-class machines make the Blue Arrow CP120 ideal for extreme 3D aerobatics in a small space, e.g. indoors or in the garden.

The Blue Arrow CP120 - full 3D aerobatic action from a compact 120-size model!

The flying qualities of the Blue Arrow CP120 are almost indistinguishable from those of a larger 3D model. Powerful, accurate and ultra-fast micro-servos ensure **direct and precise flying characteristics** even in complex 3D manoeuvres. A fully variable **six-axis gyro** of the latest generation with ultra-fast response supports the pilot with its accurate flight stabilising effect. Overall the Blue Arrow CP120 offers an impressive and very direct response to control commands for full 3D flight control.

The powerful brushless outrunner motor with rigid drive shaft to the tail rotor supplies ample power reserves for spectacular 3D manoeuvres.

The robust construction and high-quality materials ensure durability and low maintenance requirement.

The Blue Arrow CP120 is available without RC system transmitter in what is known as an **FTR version (FUTABA Transmitter Ready**).

Specification:

Main rotor diameter approx.	308 mm
Tail rotor diameter approx.	85 mm
Length approx.	290 mm
All-up weight approx.	100 g

RC functions
Pitch-axis, Roll-axis, Collective pitch, Tail rotor, Motor control

Essential accessories
T-8J - R2008SB 2.4 GHz FHSS/S-FHSS 1x F4108
General Link Modul S-FHSS 2.4 GHz 1x NE480193

A complete list of recommended accessories is included in the technical documentation supplied with the model.

Set contents
- Blue Arrow CP120 S-FHSS RTB
- LiPo battery, 3.7 V / 600 mAh, 20C
- USB battery charger
- Replacement rotor blades
- Replacement tail rotor gearbox
- Tool set
- Operating instructions

Blue Arrow Q RTF

No. S2541

Ready-To-Fly multi-copter with numerous GPS functions for perfect aerial photographs.

The robbe Blue Arrow Q RTF is a Ready-To-Fly multi-copter with advanced GPS stabilisation. The high-quality stabilisation system ensures a stable hover and a high level of inherent stability. This makes the Blue Arrow Q an excellent choice for aerial photography and inexperienced pilots. The optional camera mount, S2541017, can be used as a simple means of installing a GoPro® camera..

GPS stabilisation
The advanced GPS stabilisation system provides effective support to the pilot when flying the Blue Arrow Q. The GPS positioning automatically maintains the Blue Arrow Q in a stable hover, without any corrections by the pilot, thereby facilitating high-quality aerial photography. The integral height sensor also monitors the Blue Arrow Q's relative height, and stabilises it automatically.

Auto-landing
Landing the Blue-Arrow Q could not be easier. The Auto-Land function is simply switched on by operating a switch on the transmitter, causing the Blue Arrow Q to return to the stored GPS co-ordinates of its starting point completely independently, where it lands automatically - without requiring any control commands at all from the transmitter. The Auto-Land function also operates as a Fail-Safe function. If the transmitter signal is lost, or if the voltage of the flight battery falls below a minimum value, the Blue Arrow Q automatically returns to its stored starting point.

Intelligent flight mode
An „intelligent flight mode" can be switched on, providing support to the pilot who has no prior flying experience. In normal flight the control commands ‚right / left' and ‚forward / back' always refer to the Blue Arrow Q's actual heading, which can be imagined as „from the view of the pilot in the model". This can be difficult for the inexperienced pilot to assimilate, especially when the model is flying towards him. In contrast, the control commands ‚right / left' and ‚forward / back' in „intelligent flight mode" refer to the position of the transmitter. This means that ‚right' is always ‚right' as seen from the transmitter, and ‚forward' is always away from the transmitter, regardless of the Blue Arrow Q's momentary heading. This makes it possible to fly and position the Blue Arrow Q without practice - even for inexperienced pilots.

Set contents
- Factory-assembled Blue Arrow Q multi-copter, almost ready to fly
- LiPo battery, 11.1 V / 2200 mAh
- Battery charger with 230 V plug-type mains PSU
- XS-7 LCD 2.4 GHz four-channel computer transmitter (set to Mode 2, can be set to Modes 1 to 4)
- Small items and accessories
- Quick-start operating and flying instructions (comprehensive instructions can be downloaded from www.robbe.com)

Features
The high-quality set is supplied complete with a robbe XS-7 2.4 GHz computer transmitter with LCD screen (pre-set to Mode 2, can be set to Modes 1-4), 3S LiPo flight battery, 11.1 V / 2200 mAh, and battery charger with 230 V plug-type mains PSU.

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	206 mm
Length approx.	290 mm
Height approx.	180 mm
All-up weight approx.	800 g
Spacing between bearer arms	250 mm
All-up weight with payload (camera) max.	1200 g

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent, Auxiliary working systems

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

robbe

THE FLYING BULLS
Fully licensed by
Red Bull® GmbH - Austria

FUTABA TRANSMITTER READY
FTR Futaba
CODE 2.4GHz INSIDE!

BO-105 Red Bull SR FTR RTF

No. RB3501

Single-rotor helicopter with detailed scale fuselage

The **BO-105 Red Bull SR FTR RTF** is a compact model of the well-known BO-105 multi-role helicopter with an excellent scale appearance. The **plastic scale fuselage** is particularly well detailed, ensuring that the model looks very realistic in the air. A magnetic cabin latch ensures fast, easy battery swaps. The **single-rotor** design is ideal for the advanced beginner, and offers extremely stable flying characteristics. A **triple-axis gyro system** provides support to the pilot during those first few practice flights. The helicopter can be flown indoors and also outdoors in flat-calm conditions or light breezes.

The full-size
The B0 105 is probably the best-known and most widely used multi-role helicopter ever developed and manufactured in Germany. It is employed by the police and the armed forces for civilian protection and disaster management, and is also the choice of many civilian operators. This version depicts the BO 105 in probably its best-known livery as an aerobatic helicopter of the legendary Flying Bulls.

The model
The single-rotor version of the new model has been developed in order to give the more advanced beginner to model helicopter flying the chance to enjoy scale flying. The model's benign flying characteristics make it a simple matter to move up from the co-axial helicopter to the single-rotor type.

Set contents
- Factory-assembled scale model helicopter, set up ready to fly
- Detailed scale plastic fuselage with magnetic canopy latch for easy battery swap
- Single-rotor head with flybar
- Miniature motors for primary and tail rotor drive systems
- LiPo battery, 3.7 V / 450 mAh
- USB battery charger
- Gyro system
- J4 2.4 GHz LCD transmitter set to mode 2; can be converted to mode 1
- Replacement tail rotor
- 4 x dry cells for transmitter
- Operating instructions in German

(instructions in various foreign languages can be downloaded from: www.robbe.com)

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. The model can therefore be flown using any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up or making the change.

Features
The RTF version of the model includes a J4 2.4 GHz LCD transmitter in Mode 2 form (can be set to Mode 1), LiPo flight battery and USB battery charger.
No additional accessories are required.

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EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	225 mm
Tail rotor diameter approx.	46 mm
Length approx.	235 mm
Height approx.	88 mm
All-up weight approx.	69 g
Scale	1:50

RC functions
Pitch-axis, Roll-axis, Yaw, Climb/descent

A complete list of recommended accessories is included in the technical documentation supplied with the model.

robbe

THE FLYING BULLS
Fully licensed by
Red Bull® GmbH - Austria

FUTABA TRANSMITTER READY FTR Futaba CODE INSIDE 2.4GHz S.BUS

BO-105 Red Bull CP FTR RTF

No. RB3502

Four-blade helicopter with detailed scale fuselage

The **BO-105 Red Bull CP FTR RTF** is a compact model of the well-known BO-105 multi-role helicopter with an excellent scale appearance. The **plastic scale fuselage** is particularly well detailed, ensuring that the model looks very realistic in the air. The CP version is fitted with a sophisticated and convincing **four-blade rotor head with collective pitch** which underlines its scale aspirations. A magnetic cabin latch ensures fast, easy battery swaps.

The model is very agile in the air, and the **brushless main motor** provides ample reserves of power. The three high-quality 1.9 g servos are factory-installed and provide a sensation of accurate control. The integral **triple-axis gyro system** makes it easy to move up from a single-rotor helicopter to a model with collective pitch control. This helicopter is so inherently stable that the pilot will very quickly feel at home flying it.

The size of this version of the BO 105 makes it ideal for flying indoors, but it can also be flown outdoors in flat calm conditions or light breezes.

The full-size
The B0 105 is probably the best-known and most widely used multi-role helicopter ever developed and manufactured in Germany. It is employed by the police and the armed forces for civilian protection and disaster management, and is also the choice of many civilian operators. This version depicts the BO 105 in probably its best-known livery as an aerobatic helicopter of the legendary Flying Bulls.

Set contents
- Factory-assembled scale model helicopter, set up ready to fly
- Detailed scale plastic fuselage with magnetic canopy latch for easy battery swap
- Four-blade rotor head
- Brushless main motor
- 10 A brushless speed controller
- Three 1.9 g digital servos
- LiPo battery, 3.7 V / 600 mAh
- Battery charger with plug-type mains PSU
- Triple-axis gyro system
- J6 Pro pre-programmed 2.4 GHz six-channel computer radio control system
- Replacement tail rotor
- Operating instructions in German

(instructions in various foreign languages can be downloaded from www.robbe.com)

Futaba Transmitter Ready (FTR)
The 2.4 GHz radio control system included in the set works according to the FTR standard (Futaba Transmitter Ready). This means that the transmitter and receiver exploit the Futaba S-FHSS code, and are therefore compatible with all Futaba S-FHSS radio control systems, such as the T6J or T14SG. As a result the model can be flown directly with any high-quality Futaba S-FHSS radio control system - ideal for all modellers moving up and changing direction.

Features
The RTF version is supplied complete with J6 Pro 2.4 GHz six-channel computer radio control system, LiPo flight battery and battery charger with plug-type mains PSU.

Licensed by Red Bull® GmbH of Austria

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	245 mm
Tail rotor diameter approx.	56 mm
Length approx.	236 mm
Height approx.	85 mm
All-up weight approx.	89 g
Scale	1:50

RC functions
Pitch-axis, Roll-axis, Yaw, Collective pitch, Motor control

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

THE FLYING BULLS
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Red Bull® GmbH - Austria

Cobra V2 Red Bull RTF 2.4 GHz

No. RB3500

Finely detailed scale model helicopter of the famed RED BULL machine.

The full-size

The Cobra has ranked as one of the stars of the RED BULL Flying Bulls fleet since 2005. Prior to this, the ex-US Army attack helicopter with its top speed of 350 km/hr had a distinguished past. It starred in many American cinema films and TV series.

The model

Experience the real feeling of piloting this machine - in model form. This model was originally marketed several years ago, but has now been completely revised by our development team. The model helicopter has been fitted with a new mechanical system with collective pitch, specially designed to suit the Cobra's narrow fuselage, together with an electronic gyro stabilisation system matched to the mechanics. The fuselage is also a new development, produced as finely detailed injection-moulded parts, and is finished in a complex printed colour scheme which accurately reproduces the full-size machine.
The Cobra model is suitable for large indoor spaces or for outdoor flying in flat calm or light breezes. The complete set is rounded off by proven robbe technology, with a 2.4 GHz four-channel transmitter, charger and battery.
The comprehensive spare parts service - typical for robbe models - takes the sting out of the occasional hard landing.

Licensed by Red Bull® GmbH - Austria.

Set contents

- Factory-assembled scale model helicopter, set up ready to fly
- Detailed scale plastic fuselage with magnetic canopy latch for swift battery change
- Scale two-blade rotor head
- Brushless main motor
- brushless speed controller
- Three digital servos
- LiPo battery, 7.4 V 2S / 600 mAh, 30C
- Battery charger with mains PSU
- Triple-axis gyro system
- J6 Pro pre-programmed 2.4 GHz six-channel computer radio control system
- German operating instructions

(instructions in various foreign languages can be downloaded from www.robbe.com)

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	319 mm
Tail rotor diameter approx.	80 mm
Length approx.	365 mm
Height approx.	110 mm
All-up weight approx.	150 g
Scale	01:40

RC functions

Pitch-axis, Roll-axis, Yaw, Collective pitch, Motor control

Essential accessories

AA-size dry cell, alkaline AA-R6	8x 8008

A complete list of recommended accessories is included in the technical documentation supplied with the model.

The illustration shows the model assembled. The canopy design can differ from the illustrations.

T-REX 150 DFC Combo BTF robbe No. RH15E02X

The T-REX 150 - 3D machine with the exclusive robbe look!

Enter the new world of mini 3D helicopters with the exclusive robbe version of the T-REX 150! Never has there been a model helicopter of this size which displayed such an impressive performance in the air.

The T-Rex 150 DFC is now capable of flight manoeuvres which were previously the preserve of its bigger brothers. Manoeuvres such as piro-flips, funnels and inverted backwards speed circles - this exceptional little helicopter can do all of them without problem. Through all these manoeuvres the tail stays exactly where it is put, as if nailed to the sky.

The motor also generates plenty of power. Even towards the end of the flight (4 to 6 minutes), there is no sign of power sag from the 2S 250 mAh LiPo flight battery. Any pilot who tries out the T-REX 150 won't be able to stop hurling this tiny, powerful 3D chopper through violent aerial manoeuvres in the smallest possible space.

Special features:
- Bind To Fly: in just a few seconds the model can be bound to any Futaba radio control system with the 2.4 GHz S-FHSS transmission protocol (T6J, T8J, T14SG, FX22, FX32 and T18MZ). Alternatively a FASST system can be used in conjunction with the FHSS General Link module.
- Since it is possible to connect satellite receivers, the T-REX 150 DFC can also be operated with Spektrum DSM2 / DSMX and JR DSM2 equipment.
- 2S 250 mAh LiPo flight battery included in the set.
- Integral triple-axis gyro system.
- Not just suitable for pro-standard pilots. The model's manoeuvrability can be adjusted to suit the pilot's preferences using the potentiometer mounted directly on the circuit board of the flybarless system.

Set contents
- T-REX 150 DFC Combo BTF
- 150M brushless motor
- 150M tail rotor motor
- 2 x DS150 swashplate servos
- DS155 swashplate servo
- Beginner's rotor blades
- 3D rotor blades
- Tail rotor
- LiPo flight battery
- Binding plug
- Operating instructions

Specification:

Main rotor diameter approx.	271 mm
Tail rotor diameter approx.	40 mm
Length approx.	255 mm
Height approx.	85 mm
All-up weight approx.	70 g
Power system	Electric motor

RC functions
Roll-axis, Pitch-axis, Tail rotor, Collective pitch, Motor speed

Essential accessories
T14SG-R7008SB 2.4 GHz FASSTest®
1x F8075
LiPo-Ladegerät 2S T-REX 150
1x HEC15001

A complete list of recommended accessories is included in the technical documentation supplied with the model.

The illustration shows the model assembled. The canopy design can differ from the illustrations.

T-REX 150 DFC Combo BTF

No. RH15E01X

Small super-sport model with superb performance!

When you see the **T-REX 150 Super Combo DFC** fly for the first time, you won't be able to believe your eyes! Never has there been a model helicopter of this size which displayed such an impressive performance in the air.

The T-Rex 150 DFC is now capable of flight manoeuvres which were previously the preserve of its bigger brothers. Manoeuvres such as piro-flips, funnels and inverted backwards speed circles - this exceptional little helicopter can do all of them without problem. Through all these manoeuvres the tail stays exactly where it is put, as if nailed to the sky.

The motor also generates plenty of power. Even towards the end of the flight (4 to 6 minutes), there is no sign of power sag from the 2S 250 mAh LiPo flight battery. Any pilot who tries out the T-REX 150 won't be able to stop hurling this tiny, powerful 3D chopper through violent aerial manoeuvres in the smallest possible space.

Special features:

- Bind To Fly: in just a few seconds the model can be bound to any Futaba radio control system with the 2.4 GHz S-FHSS transmission protocol (T6J, T8J, T14SG, FX22, FX32 and T18MZ). Alternatively a FASST system can be used in conjunction with the FHSS General Link module.
- Since it is possible to connect satellite receivers, the T-REX 150 DFC can also be operated with Spektrum DSM2 / DSMX and JR DSM2 equipment.
- 2S 250 mAh LiPo flight battery included in the set.
- Integral triple-axis gyro system.
- Not just suitable for pro-standard pilots. The model's manoeuvrability can be adjusted to suit the pilot's preferences using the potentiometer mounted directly on the circuit board of the flybarless system.

Set contents

- T-REX 150 DFC Combo BTF
- 150M brushless motor
- 150M tail rotor motor
- 2 x DS150 swashplate servos
- DS155 swashplate servo
- Beginner's rotor blades
- 3D rotor blades
- Tail rotor
- LiPo flight battery
- Binding plug
- Operating instructions

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	271 mm
Tail rotor diameter approx.	40 mm
Length approx.	255 mm
Height approx.	85 mm
All-up weight approx.	70 g
Power supply	2S 250 mAh
Power system	Electric motor

RC functions

Roll-axis, Pitch-axis, Tail rotor, Collective pitch, Motor speed

Essential accessories

T14SG-R7008SB 2.4 GHz FASSTest®
1x F8075

LiPo-Ladegerät 2S T-REX 150
1x HEC15001

A complete list of recommended accessories is included in the technical documentation supplied with the model.

The illustration shows the model assembled. The canopy design can differ from the illustrations.

T-REX 450L Dominator Super Combo 6S

T-REX 450L Dominator Super Combo 6S **No. RH45E10X**
T-REX 450L Dominator Super Combo 3S **No. RH45E13X**

T-REX 450L Dominator – A completely new Dominator concept!

The T-Rex 450L Dominator is not only larger than its stable-mate, but is based on a completely new chassis design. And it's not just the chassis that is completely new: the power train has also been updated for a 6S battery, ensuring that the model fully lives up to its Dominator label. The new concept incorporates many detail features from the new T-Rex 800E Pro DFC, which have been fine-tuned for the new model in elegant fashion. These features include the new chassis stiffeners for the motor mount, the new main and tail rotor blades, and the stylish vertical stabiliser. The new T-Rex 450L Dominator also boasts the new DS430M swashplate servos and the completely new RCE-BL45X speed controller. The re-designed canopy provides a sleek, elegant outer sheath for all these innovations.

Set contents No. RH45E10X
- 1 x T-REX 450L Dominator
- 1 set CFRP main rotor blades
- 1 set tail rotor blades
- 1 x 460MX brushless motor (1800 kV)
- 1 x 3GX flybarless system
- 3 x DS430M digital swashplate servo
- 1 x DS525M digital tail rotor servo
- 1 x RCE-BL45X brushless speed controller
- German building and operating instructions

Set contents No. RH45E13X
- 1 x T-REX 450L Dominator
- 1 set CFRP main rotor blades
- 1 set tail rotor blades
- 1 x 460MX brushless motor (3200 kV)
- 1 x 3GX flybarless system
- 3 x DS416M digital swashplate servo
- 1 x DS525M digital tail rotor servo
- 1 x RCE-BL45X brushless speed controller
- German building and operating instructions

Specification:

Main rotor diameter approx.	804 mm
Tail rotor diameter approx.	171 mm
Length approx.	705 mm
Height approx.	205 mm
All-up weight approx.	730 g
Power system	Electric motor

RC functions
Roll-axis, Pitch-axis, Collective pitch, Tail rotor, Motor control

Essential accessories No. RH45E10X

T14SG-R7008SB 2.4 GHz FASSTest®	1x F8075
LiPo-Akku 6S1P 22,2V 1250mAh/45C	1x HBP12501
POWER PEAK® B6 EQ-BID	1x 8561
Charge lead, T-connector	1x 8881
Self-adhesive hook-and-loop tape, black, 2 x 20 mm x 0.5 m	1x 50590002
T-socket pack of 10	1x 8895

Essential accessories No. RH45E13X

T14SG-R7008SB 2.4 GHz FASSTest®	1x F8075
LiPo-Akku ROXXY® Evo 3-2200T 30C	1x 6613T
POWER PEAK® A4 EQ-LCD 230 V / 12 V	1x 8560
Charge lead, T-connector	1x 8881
Self-adhesive hook-and-loop tape, black, 2 x 20 mm x 0.5 m	1x 50590002
T-socket pack of 10	1x 8895

A complete list of recommended accessories is included in the technical documentation supplied with the model.

The illustration shows the model assembled. The canopy design can differ from the illustrations.

T-REX 550E PRO DFC Super Combo

T-REX 550E PRO DFC Super Combo **No. RH55E06X**
T-REX 550E PRO DFC Combo **No. RH55E07X**

Face-lift version of the popular T-Rex 550 Pro DFC, with more powerful motor

The brand-new T-Rex 550E Pro DFC has been given a power make-over with the new 730MX (850 kV) motor. The size of the T-Rex 550E Pro DFC is the perfect compromise between stability and agility.

In the face-lift version the helicopter features many improvements including CNC-machined modulus-1 main gearwheel, improved tail rotor drive system and two-point tail rotor linkage. However, the main change is the new 730MX motor. This size of motor is normally the preserve of larger 700-class machines, and that gives a clue to the amount of power which lurks in the new T-Rex. The chassis side frames have been re-designed to accept the new motor, enormously simplifying installation and maintenance.

Set contents No. RH55E06X
- T-REX 550E DFC
- Castle Talon 90 BEC speed controller
- 550 3G main rotor blades
- CFRP tail rotor blades
- 3 x DS615 digital swashplate servo
- 1 x DS655 digital tail rotor servo
- 3GX flybarless system
- 730MX brushless motor
- Building and operating instructions

Set contents No. RH55E07X as No. RH55E06X but without:
- 3GX flybarless system

We recommend the following flybarless systems for the Combo version:
- F1649 - CGY-750E flybarless gyro

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	1248 mm
Tail rotor diameter approx.	254 mm
Length approx.	1160 mm
Height approx.	330 mm
All-up weight approx.	2800 g

RC functions
Pitch-axis, Roll-axis, Collective pitch, Tail rotor, Motor control

Essential accessories

T14SG-R7008SB 2.4 GHz FASSTest®	1x F8075
LiPo-Akku ROXXY® Evo 6-5000 30C	1x 6640
POWER PEAK® B6 EQ-BID	1x 8561
CT4 gold charge lead, 4 mm	1x 4059
Heat-shrink sleeve, D6.4 2 x 0.5m red / black	1x 5154
GO4 plug+socket pack of 2+2	1x 4042

A complete list of recommended accessories is included in the technical documentation supplied with the model.

The illustration shows the model assembled. The canopy design can differ from the illustrations.

T-REX 600E PRO DFC Super Combo

T-REX 600E PRO DFC Super Combo **No. RH60E01A**
T-REX 600E PRO DFC Combo **No. RH60E02A**

T-REX 600E PRO with new high-power motor for even more flying fun

The **T-Rex 600E PRO DFC** has had a power make-over. The new **750MX motor** delivers incredible power and performance to your helicopter.

In addition to the familiar features, such as **DFC rotor head** and **two-point tail rotor linkage**, the **T-Rex 600E PRO DFC** is now fitted with a main gearwheel and tail rotor gearbox made of heavy-duty black plastic. The stiffener plate at the chassis side frames is also new; a measure which allows the motor's power to be exploited efficiently.

the model retains proven electronic components. For example, the **DS615** swashplate servos and the **DS655** tail rotor servo are included as standard.

Set contents No. FH60E01A
- 1 x T-REX 600E PRO DFC
- 1 set CFRP main rotor blades
- 1 set CFRP tail rotor blades
- 1 x 750MX brushless motor (530 KV)
- 1 x 3GX flybarless system
- 3 x DS 615 digital swashplate servo
- 1 x DS 655 digital tail rotor servo
- 1 x Castle ICE2 HV 80A brushless speed controller
- External BEC with regulator
- Building and operating instructions

Set contents No. RH60E02A as No. RH60E01A, but without:
- 3GX Flybarless-System

Für die Combo-Version empfehlen wir folgende Flybarless-Systeme:
- F1649 - Kreisel CGY-750 Flybarless

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

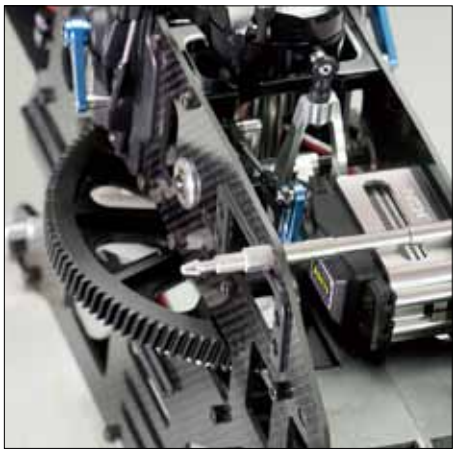
Main rotor diameter approx.	1347 mm
Tail rotor diameter approx.	260 mm
Length approx.	1160 mm
Height approx.	319 mm
All-up weight approx.	3800 g

RC functions
Pitch-axis, Roll-axis, Collective pitch, Tail rotor, Motor control

Essential accessories

T14SG-R7008SB 2.4 GHz FASSTest® F8075	1x
LiPo-Akku ROXXY® Evo 6-3000 30C 6622	2x
LiPo-Akku ROXXY® Evo 2-2600 20C 6975	1x
POWER PEAK® I4 EQ-BID	1x 8507
GO4 plug+socket pack of 2+2	1x 4042
Heat-shrink sleeve, D6.4 2 x 0.5m red / black	1x 5154
CT4 gold charge lead, 4 mm	1x 4059

A complete list of recommended accessories is included in the technical documentation supplied with the model.



The illustration shows the model assembled. The canopy design can differ from the illustrations.

T-REX 800E PRO DFC Super Combo

No.: RH80E03X

T-REX 800E PRO DFC – The new PRO version of the largest T-REX!

We proudly present the new PRO DFC version of the robbe / Align T-REX 800E in a completely revised form and with a new ‚look'. In Super Combo form this giant machine offers everything the chopper enthusiast could desire.
In addition to the popular Align 3GX flybarless system this helicopter is equipped with a completely new package of electronic components.

The swashplate is now directly actuated by the servos. The chassis has been completely revised, with new, red-anodised aluminium parts, improving both the machine's stability and its appearance. The re-designed stabiliser and the revised landing gear shape also make an important contribution to the helicopter's sporty appearance.

Set contents
- 1 x T-REX 800E PRO DFC
- 1 x CFRP tail boom
- 1 Set CFRP main rotor blades
- 1 Set CFRP tail rotor blades
- 1 x 850MX brushless motor (490 KV)
- 1 x 3GX flybarless system
- 3 x BL800H brushless digital swashplate servo
- 1 x BL850H brushless digital servo for tail rotor
- 1 x Castle Edge HV 160A brushless speed controller
- Building and operating instructions

EINSTEIGER FORTGESCHRITTENER EXPERTE

Specification:

Main rotor diameter approx.	1740 mm
Tail rotor diameter approx.	301 mm
Length approx.	1490 mm
Height approx.	402 mm
All-up weight approx.	5400 g
Motor	850MX (490 kV)
Power system	Electric motor

RC functions
Roll-axis, Pitch-axis, Collective pitch, Tail rotor, Motor control

Essential accessories

T14SG-R7008SB 2.4 GHz FASSTest®	1x F8075
LiPo-Akku ROXXY® Evo 6-5000 40C	2x 6992
LiPo-Akku ROXXY® Evo 12-4500 30C	1x 6994
LiPo-Akku ROXXY® Evo 2-2600 20C	1x 6975
POWER PEAK® I4 EQ-BID	1x 8507
GO 6 socket pack of 10	1x 8165
GO 6 plugs pack of 10	1x 8164
Heat-shrink sleeve, D6.4	2 x 0.5m red / black 1x 5154

A complete list of recommended accessories is included in the technical documentation supplied with the model.

robbe

2.4GHz T-FHSS

2.4GHz FHSS

2.4GHz S-FHSS

S.BUS 2

The Home menu is used to display the travels for transmitter controls 1 ... 4, the trims and the essential telemetry data.

Set contents
1 Megatech T4PLS 2.4 GHz T-FHSS® transmitter
1 R304SB 2.4 GHz T-FHSS® receiver
1 standard switch harness
1 mini-screwdriver

Set contents
- 1 Megatech T4PLS 2.4 GHz T-FHSS® transmitter
- 1 R304SB 2,4 GHz T-FHSS® receiver
- 1 R 2104GF 2,4 GHz S-FHSS receiver
- 1 Standard switch harness
- 1 Mini-screwdriver

T4PLS-R304SB 2.4 GHz T-FHSS®

T4PLS-R304SB 2.4 GHz T-FHSS®

No. F3039

T4PLS-R304SB-R2104GF 2.4 GHz

No. F3038

Everything in hand! - Fully expanded four-channel pistol-grip transmitter with top-class performance and integrated telemetry function, exploiting 2.4 GHz FHSS technology.

The T4PLS exploits Futaba FHSS frequency hopping technology to provide optimum transmission security and a direct, ultra-precise sensation of control.
Combine all this with a comprehensive array of functions and the usual high Futaba quality, and the T4PLS is the perfect transmitter for all demanding racing car and boat operators.
The transmitter case lies comfortably in the hands, and provides a control layout of outstanding ergonomic efficiency.
The large, centrally positioned, high-resolution, backlit 128 x 64 dot graphic screen ensures good legibility in all light conditions.
The graphical user interface, with the renowned, simple Futaba menu structure, makes the unit very simple to operate.
The menu system is controlled intuitively using the 3D hot-key in conjunction with two supplementary buttons. Experience the new sensation of control using the new adjustable pistol-grip trigger, with digital trims and trim value memory.
Side-mounted rotary controls and switches provide a practical means of operating auxiliary functions even during a race.

Highlights

- T-FHSS® 2.4 GHz technology
- Frequency Hopping FHSS modulation for good interference rejection
- Four-channel telemetry system
- Real-time display on large integral screen
- User-variable alarm sound and output
- Automatic timer-controlled telemetry data recording
- large 65 x 32.5 mm backlit screen (128 x 64 dots)
- Normal servo outputs and S-BUS technology for fully digital connection of S.BUS servos, S.BUS speed controllers and S. BUS sensors
- Fully expanded four-channel transmitter with nine controls, most of them freely assignable

Transmission

- Four channels
- T-FHSS® 2.4 GHz technology
- 100 mW transmitter power
- Real-Time-Response
- The latency (delay between moving the stick and the servo's response) of the FHSS system is much shorter than with other 2.4 GHz systems
- Good range
- Direct, ultra-fast, fully digital modulation for ultra-short response times
- Switchable FHSS High-Speed mode for ultra-fast 3 ms control of digital servos (15 ms in Normal mode)
- Easy Link - extremely simple and fast binding procedure between transmitter and receiver
- Extremely fast, reliable, automatic re-binding even under difficult conditions
- Intelligent servo timing for consistent servo movement, and the prevention of servo response differences
- No loss of response speed even when the frequency band is densely populated

Specification:

Functions	8 / 4 servos
Frequency band	2.404 ... 2.4475 GHz
Transmitter power	100 mW
Transmission system	T-FHSS® / S-FHSS / FHSS
Channel spacing	1500 kHz
Power supply	4 dry cells, 5 NiMH cells or 2S LiPo
Current drain	approx. 150 mA
Weight approx.	550 g

Not compatible with FASST receivers; only with R603GF, R2004GF, R2104GF, R2006GS, R2008SB and R304SB FHSS receivers.

Receiver R304SB 2.4 GHz T-FHSS®

Frequency band	2.404 ... 2.4475 GHz
Spot frequencies	30
Channel count	4
Channel spacing	1500 kHz
Transmission system	FHSS, S-FHSS, T-FHSS®
Voltage	4.8...7.4 Volt (4 - 5 Nx, 2 LiFe, 2 LiPo)
Current	40 mA
Dimensions	35.1 x 23.2 x 8.5 mm
Aerial length	17 cm
Weight approx.	6,6 g

Essential accessories

AA-size dry cell, alkaline AA-R6	4x 8008
Plug-type mains charger, Tx 4-5Nx Rx 4-5NX 150 mA	1x 8898

Recommended accessories

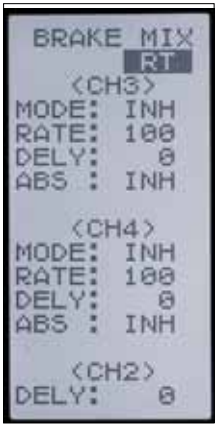
Transmitter battery, 5 NiMH 2000 mAh 4/5 A	1x 4669
Plug-type mains charger, Tx 4-5Nx Rx 4-5NX 150 mA	1x 8898
T4YF - T4PK transmitter charge lead, D 1.3 mm	1x F1535
Receiver battery charge lead, banana plug	1x F1416
Power Pack, 5 NiMH 1400 2/3A, flat	1x 4582
Aluminium transmitter case, Racing Team	1x F1555
Temperature sensor, 125°C	1x F1713
SBS01T temperature sensor 200°C	1x F1730
SBS01RO RPM sensor, optical	1x F1731
SBS01RM RPM sensor, magnetic	1x F1732
SBS-01V voltage sensor	1x F1735

Perfectly positioned, backlit graphical screen, easily legible.

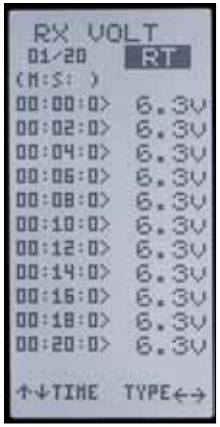
Switches and buttons for adjustments and switching processes are housed in the pistol grip for ease of access.

Trim buttons positioned on the steering wheel dome for ease of access.

All the telemetry data are displayed in clear form in the Home 2 menu.



The transmitter provides convenient brake mixers, both for separate front and rear wheel brakes, and also for rear-wheel and separate front-wheel brake.



Recorded telemetry data; in this case the receiver battery voltage. Up to 200 items of data can be recorded per sensor.

Steering set-up menu for separate or joint control of front and rear wheel steering. Same-sense and opposite-sense steering is possible.

Socket for updating the transmitter software, and for programming speed controllers, charging port..

T4PLS-R304SB 2.4 GHz T-FHSS®

Telemetry
- Synchronised bi-directional communication between transmitter and receiver, with high telemetry data rate (up to nine times per second)
- Four telemetry channels
- User-variable alarm sound and output
- Automatic timer-controlled telemetry data recording
- Real-time display of telemetry data on integral screen
- Receiver signal strength display for range monitoring
- Receiver battery low voltage warning system for monitoring the receiver battery
- Sensors can be connected to S.BUS2 input for:
  - voltage of drive battery (0-70 V DC)
  - rotational speed (optical or magnetic)
  - temperature (125°C or 200°C)

S.BUS technology
- R304SB receiver with four normal servo outputs and one S.BUS socket for fully digital connection of S-BUS components such as S.BUS servos, S.BUS speed controllers and S.BUS sensors
- All S.BUS servos can also be connected to the receiver's normal servo outputs
- Digital BUS technology for model sport
- Pioneering serial control bus
- S.BUS1 and S.BUS2 (bi-directional) compatible
- Permits ideal positioning of all components for efficient wiring
- Future-proof digital technology for all future Futaba components
- Serial digital signal, ideal for - S.BUS servos, S.BUS speed controllers and S. BUS sensors

Functions - general
- 40 integral model memories
- Wide receiver voltage range of 3.6 V to 8.4 V provides flexibility in choice of receiver battery
- Wide transmitter voltage range for dry cells, NiMH and LiPo batteries
- Future-proof thanks to software update capability via CIU2 adapter
- Proven mixer menus for programming virtually all types of ground vehicle (off-road, on-road 1:12 to 1:6, crawler, etc.) and racing boat
- Servo travel adjustment for channels 1-4
- Servo reverse and centre offset for channels 1-4
- On-screen trim value display
- Fail-safe settings for channel 1-4, B-F/S for throttle function
- Count-up or count-down stopwatch with lap timer and fuel timer

Optional LiPo battery for long operating times, No. 4618.

R304SB telemetry S.BUS receiver

robbe

2.4GHz T-FHSS AIR Telemetry System

2.4GHz S-FHSS

S.BUS

S.BUS 2

T10J-R3008SB 2,4 GHz T-FHSS®

No. F4109

Fully expanded ten-channel hand-held transmitter with integral telemetry function, exploiting 2.4 GHz T-FHSS® frequency-hopping technology.

The ideal system for advanced pilots who wish to control fixed-wing model aircraft, helicopters and multi-copters, and appreciate the sensation of accurate control.
With its extremely comprehensive range of functions, the T10J can cope effortlessly with very demanding applications. In terms of programmable features there is virtually nothing it cannot do. The ergonomically efficient transmitter case is made to the usual high Futaba standards, lies comfortably in the hands, and is designed to allow all controls to be reached easily.
The backlit LCD screen provides 128 x 64 dots, and its large pixel size ensures good legibility in all lighting conditions.
The graphic user interface, with the renowned, simple Futaba menu structure, makes the unit very simple to operate. The menu structure can be displayed in any of seven languages. The 3D hot-key system is intuitive in operation, providing fast and simple navigation through the menu structure and easy adjustment of all parameters.

Highlights
- T-FHSS® 2.4 GHz technology
- High-speed Frequency Hopping modulation (100 x per second) for good interference rejection
- Future-proof (already conforms to the new EU norm for 2015)
- Integral 32-channel long-range telemetry system
- Real-time telemetry display on large screen
- Speech output via optional earphone with 3.5 mm barrel connector
- Melody and sound output (optionally via internal beeper or optional earphone)
- Vibration alarm
- Large 65 x 34 mm backlit screen (128 x 64 dots)
- S-BUS technology for fully digital inclusion of S.BUS servos, S.BUS speed controllers and S.BUS sensors
- S.BUS support makes it ideal for model helicopters with S.BUS flybarless systems
- Integral patch aerial for optimum signal radiation at all times
- Fully expanded ten-channel transmitter with 19 controls
- Accurate, slop-free sticks with Open-Stick mechanism
- The stick units are of universal design (Modes 1 and 2), and can be converted by the user.
- Supplied with high-power NiMH battery - ten hours operating time - and battery charger.

Set contents
- 1 T10J 2.4 GHz T/S-FHSS transmitter
- 1 R3008SB 2.4 GHz T-FHSS® receiver
- 1 5NiMH 2000 mAh transmitter battery
- 1 Tx-Rx 150 mA plug-type charger
- 1 Switch harness with charge socket
- 1 Operating instructions, German

Specification:

Functions	20/10 Servos
Spot frequencies	31
Frequency band	2.404 ... 2.4475 GHz
Transmission system	T-FHSS® / S-FHSS
Channel spacing	2000 kHz
Power supply	4,8...7,4 Volt
Current drain	ca. 150 mA
Dimensions	185 x 200 x 80 mm
Weight approx.	740 g
Additional technical data	30 simultaneous users.

Not compatible with FASST receivers; only with T-FHSS® and S-FHSS-air receiver like R603GF, R2004GF, R2104GF, R2006GS and R2008SB.Recommended for controlling all types of model, e.g. helicopters, multi-copters, fixed-wing model aircraft, trucks and boats. (For large-scale model aircraft and jets we recommend the use of radio control systems with FASSTest® transmission technology.)

Receiver R3008SB 2.4 GHz T-FHSS®

Frequency band	2,4GHz T-FHSS®
Spot frequencies	31
Channel count	10
Channel spacing	2000 kHz
Transmission system	T-FHSS®
Voltage	3,7...7,4 Volt (4-5Nx, 2 LiFe, 1-2 LiPo)
Current	50 mA
Dimensions	47 x 25 x 14,3 mm
Aerial length	14 cm
Weight approx.	11 g

Home Menü

Integral patch aerial provides even, all-round transmission pattern without directional effect.

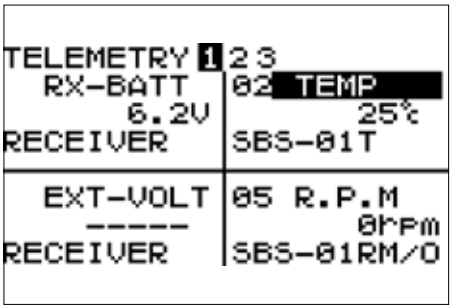
The switches are perfectly positioned, and can easily be operated without releasing the sticks.

High-quality dual-axis stick units of the open-stick type ensure accurate, fine control. Digital trims with trim value memory in each model memory.

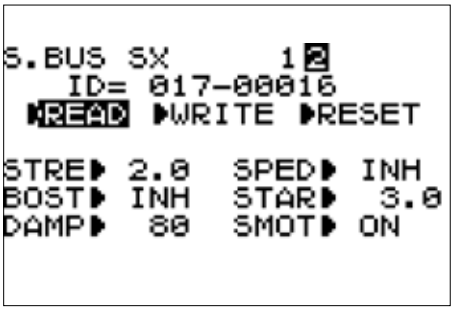
Slim hand-held transmitter with integral hand-grips for a secure hand-hold when launching gliders.

Four-way rocker button with central Enter function for fast navigation through the graphic menu. Simple, swift method of adjusting model parameters. Data are displayed on the large, backlit 128 x 64 dot graphic screen.

On the back of the transmitter are the sockets for the earphone / loudspeaker for speech output of telemetry data, and the Trainer socket for Trainer mode operations. This area also features the S.BUS socket for registering telemetry sensors and programming S.BUS servos.



Telemetry menu for setting, selecting and displaying a maximum of 32 telemetry channels.



S.BUS menu for setting the S.BUS channel number and / or programming the servo parameters.

The convenient Glider menu provides comprehensive mixer functions and control of wing control surfaces even for sophisticated models, with up to three switchable flight phases. Also features set-up menu for electric power system.

T10J-R3008SB 2,4 GHz T-FHSS®

No. F4109

Transmission
- 10 (8+2) channels
- Can be switched from T-FHSS® (10-channel) to S-FHSS (8-channel) modulation.
- T-FHSS® frequency-hopping technology with integral telemetry
- Broad channel spread is responsible for good interference rejection and ultra-fast response, giving a sensation of direct, accurate control.
- FEC technology: T-FHSS® receivers constantly scan the input signal, and apply an intelligent error correction procedure
- 100 mW transmitter power
- No loss of response speed even when the frequency band is densely occupied
- Real-time response
- Outstandingly long range
- Direct, ultra-fast, totally digital modulation for ultra-fast response
- Easy Link - fast, extremely simple binding procedure between transmitter and receiver
- Fast, secure automatic re-binding even under difficult conditions
- Intelligent servo timing for consistent servo response and the elimination of differential servo timing
- Dual-Aerial Diversity – lightning-fast switching between two receiver aerials for optimum receiver signal quality (depending on receiver)
- Integral range-check function for checking effective range before flying

Telemetry
- Synchronised bi-directional communication between transmitter and receiver, with high telemetry data rate (up to nine times per second)
- 32 telemetry channels
- Extended telemetry range
- Real-time display of telemetry data on integral screen
- Speech output via optional earphone with 3.5 mm barrel connector
- Melody and sound output (via internal beeper or optional earphone)
- Vibration alarm
- Receiver battery low voltage warning system for monitoring the receiver battery
- Freely configurable output of telemetry data using screen, sound, speech or vibration.
- Compatible with all Futaba telemetry sensors

Ergonomics
- Precision stick units for fine, accurate control
- The „Open-Stick“ mechanism features special bearings and is virtually devoid of lost motion
- Large 65 x 34 mm backlit screen (128 x 64 dots) with high contrast for excellent legibility even in strong sunlight
- Graphic user interface and intuitive 3-D hot-key for simple operation of all functions
- Seven languages available: German, English, French, Italian, Spanish, Japanese or Dutch
- Consistent, intuitive Futaba operating system for simple change-over
- Most transmitter controls freely assignable
- Fully expanded with nineteen transmitter controls
- Switchable stick modes (1-4)

Trainer function
- using optional cable
- with individual function transfer (Teacher can release individual functions to the Pupil) and mix-mode (Teacher can override all functions)

S.BUS technology
- Digital BUS technology for modelling
- Pioneering serial control bus
- Fully digital inclusion of S-BUS components such as S.BUS servos, S.BUS speed controllers and S.BUS sensors
- The eight-channel T-FHSS® receiver features eight (seven) PWM outputs and one digital S.BUS2 socket for S.BUS servos, S.BUS speed controllers and also telemetry sensors. Output channel 8 can be switched to S.BUS(1) output.
- Compatible with S.BUS1 and S.BUS2 (bi-directional)
- Permits the ideal positioning of all components, with efficient wiring

Recommended accessories

Transmitter battery, 5 NiMH 2000 mAh 4/5A	1x 4669
Plug-type mains charger, Tx 4-5Nx Rx 4-5NX 150 mA	1x 8898
T4YF - T4PK transmitter charge lead, D 1.3 mm	1x F1535
Power Pack 4NiMH 2000 flat (6A)	1x 4218
Receiver battery charge lead, banana plugs	1x F1416
Extra Voltage connecting lead	1x F1001100
Single-point neckstrap	1x F1550
FF-9 Trainer lead	1x F1591
Transmitter bag	1x F9906
Aluminium transmitter case, Aero Team	1x F1556
SBS01T temperature sensor 200°C	1x F1730
GPS multi-sensor	1x F1675
Current sensor 150 A	1x F1678
Vario sensor	1x F1712
Temperature sensor, 125°C	1x F1713
SBS01RO RPM sensor, optical	1x F1731
SBS01RM RPM sensor, magnetic	1x F1732
SBS01A vario + altimeter sensor	1x F1733
SBS01G GPS + vario + altimeter sensor	1x F1734
SBS-01V voltage sensor	1x F1735

The centre of the transmitter houses the accurately balanced neckstrap lug, beeper and on-off switch.

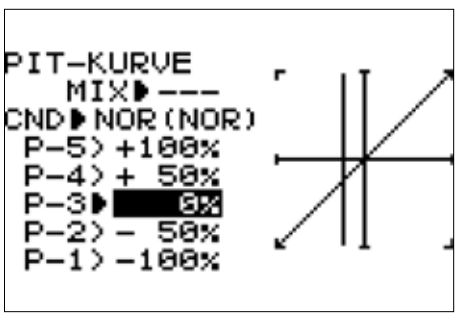
Centrally positioned rotary knob and freely assignable digital push-button.

An optional earphone is used for speech output of telemetry data.

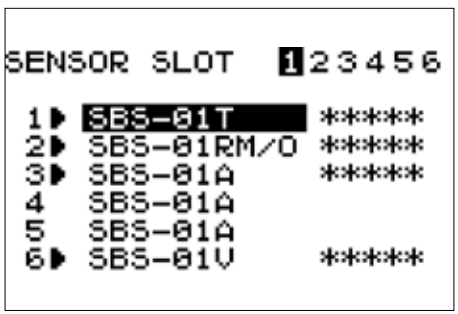
Alternatively an optional active loudspeaker can be connected for speech output.

S.BUS socket for setting the S.BUS channel number and / or programming the servo parameters.

Easily accessible controls.



Five-point curves for throttle and collective pitch in the Helicopter program. Also available for throttle and propeller pitch curves in the Power Model program.



Sensor menu, pre-configured for the standard sensors.

T10J-R3008SB 2,4 GHz T-FHSS®

No. F4109

- Future-proof digital technology for all future Futaba components
- S.BUS components can be programmed and registered directly at the transmitter
- Serial digital signal, ideal for flybarless systems, gyros and battery backers

Functions - General
- 30 internal model memories
- Model memory transfer by radio between two T10J transmitters, or from T8J to T10J.
- Graphic servo monitor provides a clear display of all servo travels, with servo test function
- Wide receiver voltage range of 3.6 V to 8.4 V allows broad choice of receiver battery types
- Future-proof: software update facility using optional CIU-2 adapter..
- Mixer menus for programming all servos and mixer functions according to model type
- Special model type specific mixer programs for:
  - Power models (2…4 wing flaps)
  - Gliders (2…6 wing flaps)
  - Helicopters (8 swashplate types)
  - For more information see „Functions in Detail“
- 5 flight modes (Helicopter menu; 3 flight modes in the Glider menu) for each model memory, freely programmable, for optimum settings in each flight mode
- Programs for all tail types: normal, V-tail, delta, flying wing, separate elevators (Ailvator)
- Servo travel adjustment for all proportional channels
- Servo reverse and centre offset for channels 1…8
- Digital trim buttons - trim values do not need to be saved when changing model memory.
- Trim value display in Home menu
- Fail-safe settings and battery fail-safe settings
- 2 operating hours timers, one of them model memory specific
- 2 freely variable stopwatches

Software list
Base functions:
- Alarm, Mixer, Low voltage, Timer
- Model select, 30 model memories, Model copy
- Trainer mode with individual function transfer and / or mix-mode operation.
- Stick Mode 1...4
- Throttle function reverse
- Multi-lingual transmitter software
- Operating hours timer
- Range-check mode
- User name (10 characters)
- Digital operating voltage display

Model functions
- Model name (10 characters)
- Servo reverse channel 1…8
- Fail-safe (channel 1…8)
- Servo travel adjustment (ATV/EPA)
- Servo centre offset (sub-trim)
- Trim value memory
- Variable trim increment
- Throttle cut
- Free channel select (5…8) and transmitter control select
- 2 count-down / count-up timers
- Model timer
- Digital stick trim with variable increment
- Idle trim with reverse (ATL)
- Reset

Fixed-wing model:
- 3 x switchable control travel (D/R)
- 4 x Exponential function (EXP)
- 6 programmable mixers with offset mixing (4 x linear, 2 x 5-point)
- Flaperon mixer with differential
- Flaperon trim (flaperon mixer value)
- V-tail mixer (V-tail)
- Delta mixer (Elevon) with differential
- Aileron -> rudder
- Elevator -> flaperon
- Flaperon -> elevator
- Airbrake (ailerons as flaps)
- Ailvator mixer (aileron - elevator)
- Snap-roll
- Gyro mixer (2/3 rates)
- Throttle curve
- Propeller pitch
- Throttle delay
- Idle 2
- Throttle - needle valve mixer
- Model type select

Model helicopter:
- 3 x switchable control travel (D/R)
- 4 x Exponential function (EXP)
- 6 programmable mixers with offset mixing (4 x linear, 2 x 5-point)
- 5-point throttle curve, Normal, Idle-up 1, 2 and 3
- 5-point collective pitch curve, Normal, Idle-up 1, 2, 3 and auto-rotation
- Hover throttle trim (Mix trimmer)
- Hover collective pitch trim
- Gyro gain set-up menu
- Offset mixer (roll - pitch-axis - tail rotor), all flight modes
- Auto-rotation with tail rotor offset
- Collective pitch -> tail rotor mixer
- Swashplate - throttle mixer
- Governor (speed regulator) set-up menu
- Variable swashplate travel (AFR)
- H1, H2, H3 (1:1:1), H4, HR3, HE3, HN3, H4X swashplate control system
- Min. and max. collective pitch adjustment
- Throttle - needle valve mixer
- Swashplate ring mixer
- Swashplate mixer menu

Model glider:
- 3 x switchable control travel (D/R)
- 4 x Exponential function (EXP)
- 6 programmable mixers with offset (4 x linear, 2 x 5-point)
- Aileron-rudder
- Rudder-aileron
- Camber-changing flaps
- Flap mixer
- Butterfly (crow) and butterfly-elevator
- Flap-elevator
- Elevator-flap
- Aileron-flap
- Aileron-airbrake
- V-tail
- Motor
- Gyro mixer
- Model type select

FX-22
Futaba
MONITOR
LINEAR
LINEAR
FX-22 Multi Graphic Display
Home / Exit
U.menu/Mon
FUTABA CO. 01:10
7.7V
T1 00:00.00
T2 00:00.00
14KA MODEL-01
01:01
VPP #1
LNK
SYS
RTN
MDL
S1

FX22+R7008SB 2,4 GHz FASSTest®

No. F8079

Fully expanded 14-channel console transmitter with high-class performance and integral telemetry function.

The FASSTest® transmission technology of the robbe Futaba FX-22 guarantees superior transmission security and a direct, ultra-precise sensation of control. Combine all this with a comprehensive array of functions which leaves little to chance, and the usual high Futaba quality, and the FX-22 is the perfect console transmitter for all demanding pilots.

The popular, proven and robust transmitter case of the FX transmitter range provides carefully arranged controls for ease of access and optimum ergonomics The large, centrally positioned, high-resolution, backlit 128 x 64 dot graphic screen ensures good legibility in all light conditions. The graphic user interface, with the renowned simple Futaba menu structure, makes the unit very simple to operate. The menu system can be displayed in any of nine languages. The Cap-Touch system is intuitive in operation, providing fast and simple navigation through the menu structure and rapid adjustment of all parameters. Experience the sensation of fine, accurate control using the special precision dual-axis stick units, with digital trims and trim value memory. Centrally positioned linear sliders and rotary knobs with unrestricted function assignment ensure ease of access to auxiliary functions for easy operation.

Highlights

- FASSTest® 2.4 GHz technology
- Combined advantages of DSSS and FHSS modulation for superior interference rejection
- Future-proof (already satisfies the new EU norm)
- Integral 32-channel telemetry system
- Telemetry range up to 1000 m
- Real-time telemetry display on large screen
- Speech output via optional earphone with 3.5 mm barrel connector
- Melody and sound output (via internal beeper or optional earphone)
- Vibration alarm
- Data recording of control signals and telemetry data in preparation
- Large 74 x 38.5 mm backlit screen (128 x 64 dots)
- S-BUS technology for fully digital incorporation of S.BUS servos, S.BUS speed controllers and S.BUS sensors
- Fully expanded fourteen-channel transmitter with 20 (22) freely programmable controls
- Accurate primary sticks with open-stick mechanisms and 12-bit resolution, zero-slop, twin ballraces
- Switchable transmission: FASSTest®, FASST and S-FHSS for compatibility with all Futaba systems

Transmission

- 14 channels
- FASSTest®technology (Futaba Advanced Spread Spectrum technology)
- Special hybrid technology combines the advantages of DSSS and FHSS modulation. Extreme channel spread (spread factor 11) through DSSS spreading combined with optimised FHSS frequency hopping produces superior interference rejection and ultra-fast response for a direct, precise sensation of control.
- 100 mW transmitter output
- Real-Time-Response. The latency (delay between moving the stick and the servo's initial movement) of the FASSTest® / FASST system is significantly faster than other 2.4 GHz systems.
- Very long range >3000m
- Ultra-fast, direct, fully digital modulation for extremely direct response
- Switchable FASSTest® High-Speed mode for ultra-fast digital servo response and 6.3 ms frame rate (12-channel, reduced telemetry functions)
- Easy Link - ultra-simple, fast binding procedure between transmitter and receiver

Specification:

Functions	14 / 32
Frequency band	2.4 ... 2.4835 GHz
Transmitter power	100 mW
Transmission system	
	FASSTest® 14 channels
	FASSTest® 12 channels
	FASST Multi 12+2 channels
	FASST 7-channel
	S-FHSS 8-channel
Power supply	2S LiPo 3400 mAh / 7.4 Volt
Current drain	approx. 220 mA
Dimensions	205 x 220 x 55 mm
Weight approx.	890 g

Compatible with all S-FHSS, FASST / RASST and FASSTest® model aircraft receivers.

R7008SB 2.4 GHz FASSTest® receiver

Frequency band	2.4 – 2.4835 GHz
Spot frequencies	36
Channel count	18
Channel spacing	2048 kHz
Transmission system	FASSTest®
Voltage	3.7...7.4 Volt
	(4-5 Nx, 2 LiFe, 1-2 LiPo)
Current	50 mA
Dimensions	47 x 25 x 14.3 mm
Aerial length	14 cm
Weight approx.	11 g

Set contents

- 1 FX-22 FASSTest® transmitter
- 1 R7008SB FASSTest® receiver
- 1 2S LiPo transmitter battery, 3400 mAh
- 1 12 V Lithium battery charger (2 A)
- 1 230 Volt SPS mains PSU for charging from the mains
- 1 Switch harness
- 1 Screwdriver

Switches, controllers and linear sliders in easily accessible positions; can be assigned to any functions. The linear sliders are a practical method of controlling auxiliary functions.

Side compartment for Trainer and charge sockets, also SD card slot for memory expansion, 32 MB...2 GB (3916 models). The transmitter software can also be updated using the SD card, making it a simple matter to keep the transmitter abreast of current developments.

Precision dual-axis stick units with dual ballraces and rotary trims.

The switches plug into the circuit board, which means that they can be interchanged and re-positioned in any option well.

Short or long stick-tops can be fitted to suit hand-held and tray-mounted versions of the transmitter.

Central input area with zero-wear Cap-Touch control area, and large, backlit LCD screen.

FX22+R7008SB 2,4 GHz FASSTest®

No. F8079

- Extremely fast and reliable automatic re-binding even under difficult conditions
- Intelligent servo timing for simultaneous servo movement, prevents differential servo response
- Dual-aerial diversity – lightning-fast switching between two receiver aerials for optimum reception signal quality (depending on receiver)
- Pre-Vision – FASST / FASSTest® receivers constantly scan the input signal and apply intelligent Futaba error correction.
- No loss of response speed even when the frequency band is densely occupied
- Integral range-check function for checking radio range before flying
- Modulation can be switched to FASST or FHSS for backwards compatibility with existing Futaba components

Telemetry

- Synchronised bi-directional communication between transmitter and receiver with high telemetry data rate (max. 9 times per second)
- 32 telemetry channels
- Up to 1000 m telemetry range
- Real-time display of telemetry data on integral screen
- Speech output via optional earphone with 3.5 mm barrel connector
- Speech output control via freely assignable switches
- Melody and sound output (via internal beeper or optional earphone)
- Vibration alarm
- Data recording of control signals (stick movements) and telemetry data on SD card in preparation
- PC analysis software for recorded telemetry, GPS data and control signals in preparation
- Receiver signal strength display for monitoring radio range
- Range warning system (with optional GPS sensor) for safe flying at the limits of vision
- Receiver low battery warning system for monitoring the receiver battery
- Freely configurable output of telemetry data via screen, sound, speech and vibration

Ergonomics

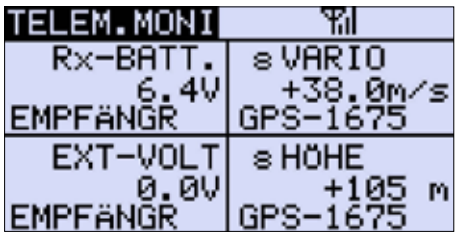
- Precision sticks with 12-bit (4096-step) resolution for extremely fine, accurate control
- The „open-stick“ mechanisms of the primary sticks are ballraced and virtually devoid of lost motion
- Large 74 x 38.5 mm backlit screen (128 x 64 dots) with high contrast for excellent legibility even in strong sunlight
- Graphic user interface and intuitive Cap-Touch control wheel (with button lock) for simple operation of all functions
- Nine languages available: German, English, French, Italian, Spanish, Czech, Russian, Japanese and Dutch
- Standardised, intuitive Futaba operating system for simple change-over
- Freely assignable transmitter controls
- Freely selectable channel assignment
- Fully expanded with 18 controls: 6 switches, 2 rotary knobs, 2 linear sliders, plus 2 optional stick switches and other switches
- 2 linear sliders for practical control of supplementary functions
- Freely selectable trims for all transmitter controls (including switches etc.)
- Hardware reverse for all transmitter controls and switches, unrestricted selection of switching direction
- Direct model memory select in the Start display for fast model selection
- Freely configurable User menu
- Rapid switching between telemetry and Home / Timer display
- Configurable telemetry monitor menu (1 - 4)
- Mode 1 - 4 switchable

Trainer function

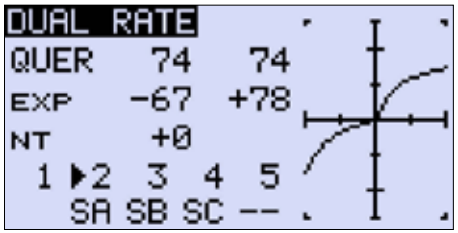
- Option of cable or radio module
- with individual function transfer (teacher can transfer individual functions to the pupil) and Mix-mode (teacher can override all functions)
- Freely configurable Trainer channel assignment

Recommended accessories

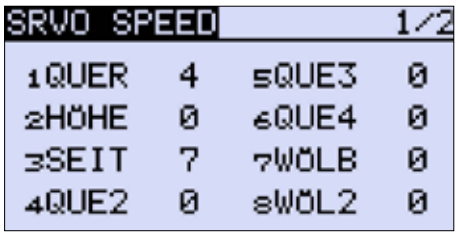
FX-30 CFRP transmitter tray	1x 8491
Aluminium transmitter case, robbe-Futaba Aeroteam	1x 8899
T14SG LiPo battery, 2S 2800 mAh	1x 4618
FX-20, T8FG two-position stick switch	1x 8051
T12FG / FX-30 charge lead, 1.7 mm	1x 8260
FX-20, T8FG three-position stick switch	1x 8052
RC charger FX-30 230 / 12 V 2 A	1x 8501
FX-20, T8FG stick switch (push)	1x 8053
2.4 GHz wireless trainer system	1x F1414
FF-9 Trainer lead	1x F1591
FF-9 Trainer lead, DIN 6-pin	1x F1592
S.BUS trainer lead	1x F1263
FF-9 - FX trainer lead, 2.5 mm	1x 8236
FF-9 Trainer lead, F 3.5	1x 8238
FF-9 flight simulator adapter lead	1x 8239
Receiver battery charge lead, banana plugs	1x F1416
FX20-40 toggle switch, 2-position short	1x F1700
FX20-40 toggle switch, 2-position long	1x F1701
FX20-40 toggle switch, 3-position short	1x F1702
FX20-40 toggle switch, 3-position long	1x F1703
2-position momentary switch, short, T18M	1x F1802
Two-position momentary switch, long-T18MZ	1x F1803
Vario and altimeter (TEK)	1x F1672
TEK compensation nozzle T	1x F1673
TEK compensation nozzle V	1x F1673V
GPS multi-sensor	1x F1675
Current sensor 150 A	1x F1678
Vario sensor	1x F1712
Temperature sensor, 125°C	1x F1713
SBS01T temperature sensor 200°C	1x F1730
SBS01RO RPM sensor, optical	1x F1731
SBS01RM RPM sensor, magnetic	1x F1732
SBS01A vario + altimeter sensor	1x F1733
SBS01G GPS + vario + altimeter sensor	1x F1734
SBS-01V voltage sensor	1x F1735



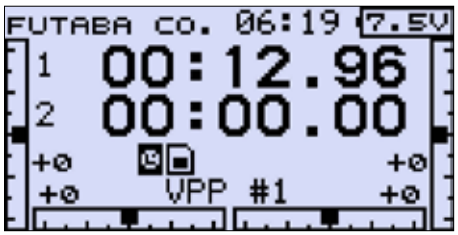
Telemetry data display



Expo or Dual Rate curve settings



Variable servo transit speed



Large stopwatch display

S.BUS technology
- Digital BUS technology for modelling applications
- Pioneering serial control bus
- Fully digital incorporation of S-BUS components such as S.BUS servos, S. BUS speed controllers and S.BUS sensors
- S.BUS1 and S.BUS2 (bi-directional) compatible
- Permits ideal positioning of all components with efficient wiring
- Future-proof digital technology for all future Futaba components
- S-BUS components can be programmed and registered directly via the transmitter
- Serial digital signal, ideal for flybarless systems, gyros and battery backers

Functions - General
- 30 integral model memories, with infinite expansion using SD cards (max. 8 GB, SD and SD-HC), 3862 models per optional SD card.
- Model memories of T8FG, T14SG or FX-20 transmitters stored on SD card can be read in directly
- Graphic servo monitor for clear display of all servo travels, with servo test function
- Broad receiver voltage range - 3.6 V to 8.4 V allows flexible choice of the receiver battery
- Future-proof: software update can be loaded from SD card.
- Practical mixer menus for programming all servos and mixer functions per model type, e.g. wing mixers
- Special model type specific mixer programs for:
  - Power models (2 - 6 wing flaps)
  - Model gliders (2 - 8 wing flaps)
  - Model helicopters (6 swashplate types)

(see “Functions in detail” for more information“)
- Five flight phases (Helicopter and Glider menus) for each model memory, freely programmable for optimum flight phase set-up - Flight phase switching with priority allocation and transition delay for smooth switch-over
- Programs for all tail types: Normal, V-tail, Delta, flying wing, separate elevators (Ailvator)
- Servo travel adjustment with Limit function for all proportional channels
- Servo reverse and centre offset for channels 1 - 12
- Trims optionally flight phase specific
- Trim value display in steps or %, with zero setting through trim memory
- Fail-Safe setting and Battery Fail-Safe setting
- Two operating hours counters, one of them model memory specific
- Two freely variable stopwatches with memory function
- Switchable large-format stopwatch display
- Function button lock prevents accidental inputs
- New! Servo transit speed adjustment for all proportional channels.

New update for FX22 V 3.0
Changes
In the current sensor telemetry menu the capacity limit of 4000 mAh is now pre-set. In the rpm sensor telemetry menu the adjustment range for the gearbox reduction ratio is expanded to 1 - 99.
Sensor data for „RX-BATT“, „EXT-Volt“ and signal quality are displayed directly, i.e. the values are not stored. This means that the transmitter immediately displays a value of 0.0 V when the receiver is switched off. All other sensor data (e.g. GPS co-ordinates) are stored.

New functions
The „SBUS servo“ now has the additional function **O.L.P. Overload Load Protection** (current overload guard). O.L.P. means Overload Protection. If this function is programmed the servo electronics switch off the motor if it is overloaded before damage is caused. If the overload situation passes, the electronics switch the motor back on again immediately.
All SV and SVi servo types are suitable for this function (see also the summary list in the Download area).

In the menu „Tele. settings“ the function **Telemetry Log** has been added. This can be used to save the telemetry data on the SD card. The data for all control channels 1 - 12 and up to 32 telemetry channels are stored (depending on the number of sensors in use).

The Futaba File System Utility V3 can be used to convert the data into a CSV file, and then read out using a PC. Programs such as Excel can be used to display the control signal and sensor data in tabular or graphic form.

Wireless Trainer function with S.BUS receivers.
This function enables any robbe-Futaba S.BUS receiver to be used as a „wireless Trainer system“, whether it is an S-FHSS, FASST or FASSTest® receiver. Of course, the S.BUS receiver to be used must operate on the same modulation as the Pupil transmitter, and must be bound to it. The signal and power are supplied via the S-BUS Trainer lead (No. F1263) from the Trainer socket.
All other settings are entered in the Trainer menu at the Teacher transmitter in the usual way. This forms a simple method of setting up a wireless Trainer system which operates with all modes of modulation. The channel count also rises to a maximum of sixteen, depending on the type of modulation.
Safety function:
If the Pupil transmitter is switched off, the software automatically switches to the Teacher transmitter‘s control signal.

A high-quality CFRP transmitter tray (No. 8491) is available as an optional accessory for those who wish to use the FX-22 in a tray. Alternative neckstrap systems are also available.

Neckstrap system with CFRP hand-rests for FX-20 ... FX-32 transmitters

The digital interface

safe - fast - reliable

Totally digital

Ultra-fast

Unrestricted programming

Battery de-coupled from the receiver

Optimised wiring

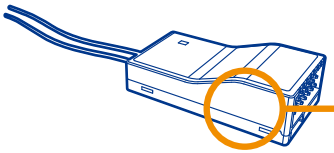
Reduced weight / volume

Flexible arrangement

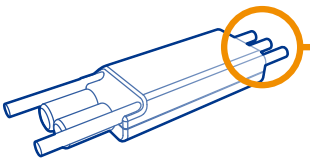
Change your thinking completely

The robbe / Futaba S.BUS system revolutionises RC modelling, and offers unprecedented new facilities.
The new digital S.BUS interface makes it possible to de-centralise the system components and arrange them with complete flexibility - whether the model is a fixed-wing aircraft, a helicopter, a boat or a ground-based vehicle.
No longer must the receiver be positioned as the central hub, with the cables converging on it like the spokes of a wheel. The same applies to the battery, which can now be installed in the position required for the correct Centre of Gravity.
The era of constraints is over.
With much more compact components - an S.BUS receiver is significantly smaller than a conventional one - you save both space and weight.
The simplified wiring also saves space and weight, and wiring arrangements are much easier to understand.
Instead of wiring which radiates out from the hub (receiver), the components of an S.BUS system - such as servos - are connected in series to the S.BUS cable loom. There is no need for individual cables from each servo to the receiver. One of the ingenious and convenient features of S.BUS technology is the programmability of the individual components.
For example, it is a straightforward matter to adjust the centre point, end-points, dead zone, anti-flutter filter and transit speed of S.BUS servos.
Despite this, S.BUS servos are no more expensive than conventional digital servos. Supplementary components such as gyros and sensors can be added to the system at any time and at any point - simply by plugging them in.
In future the S.BUS will allow you to follow a completely new, completely digital path!

S.BUS

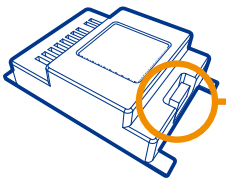


S.BUS receiver

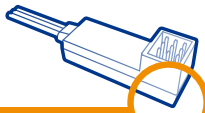


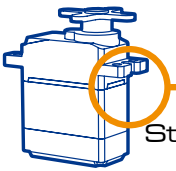
Speed controller

Flybarless gyro



Battery backer

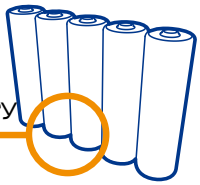




PWM adapter

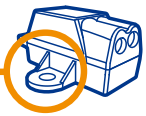
Standard servo

S.BUS servo



Battery

Gyro



Sensor

S.BUS socket

What does the term ‚S.BUS' mean?

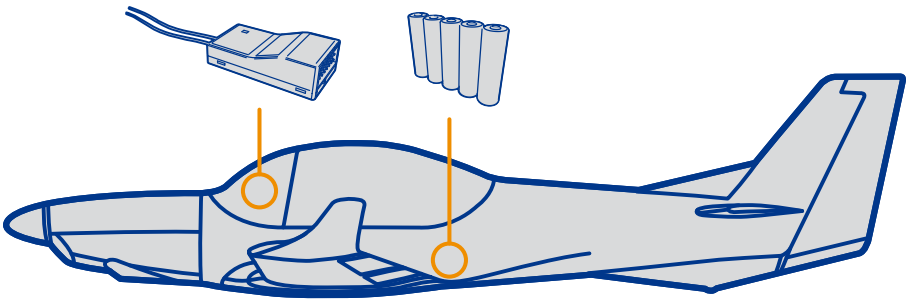
A bus is a system for transferring data between multiple participants using a common channel.
The robbe / Futaba S.BUS system is a digital bus which exchanges all the data - such as control commands and telemetry information - between the various components by means of a single cable.

This central S.BUS cable carries all the data, from which the individual S.BUS components read out the information which is addressed to them.
The user is free to address the components in any way, typically by assigning a channel to a particular servo. The programming is carried out using the transmitter, a programming unit or PC software.

S.BUS

Disconnect the power supply from the receiver

In a conventional hub / spoke wiring arrangement with the receiver as the hub, all energy for the system passes through the receiver. Supplying power to the components via the receiver places restrictions on the positioning of those components, and always involves some level of compromise.
The robbe / Futaba S.BUS heralds a new era in this respect: the S.BUS supplies energy to all components directly, and the battery can be connected to the S.BUS at any point.
This makes the positioning of all the components easier, as the receiver and batteries can be installed in the model completely independently of each other. At the same time the complexity of the wiring is greatly reduced. In some cases such an arrangement allows you to obtain the correct Centre of Gravity without the need for additional ballast. The overall length of wiring is reduced to a minimum, and this helps to save space inside the model as well as reducing overall weight. This is a clear advantage of S.BUS technology.



Overview of S.BUS components

If you wish to use the S.BUS system, the basic requirement is a robbe / Futaba receiver with an S.BUS output. These receivers include the abbreviation „SB“ (for S.BUS) in their designation. Up to eighteen control channels are available at the S.BUS output. The maximum number of channels is dictated by the transmitter you wish to use.
All robbe / Futaba radio control equipment operating in the 2.4 GHz band is compatible with the S.BUS system.
Currently available S.BUS components include the following: receivers, servos, flybarless systems, gyros, battery backers, speed controllers, PWM adapters and telemetry sensors.

Install all the components with complete flexibility

The receiver now no longer needs to be the focal point of your system. Instead the S.BUS itself forms the central digital nervous system, thereby breaking up the conventional hub / spoke wiring arrangement.
Until now each component had its fixed theoretical position - especially in model aircraft: the receiver was generally low down in the fuselage, where the reception conditions are at their worst.

Now that‘s all over: the receiver and GPS sensors can be installed in a location in the model where reception is at its best - for example, in the cockpit. The power supply can be linked into the S.BUS at any point.

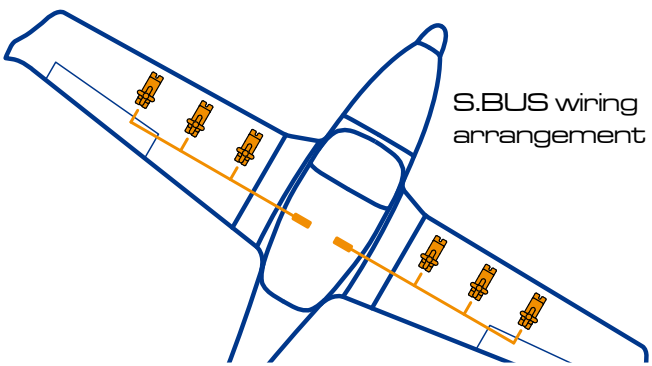
Conventional receiver

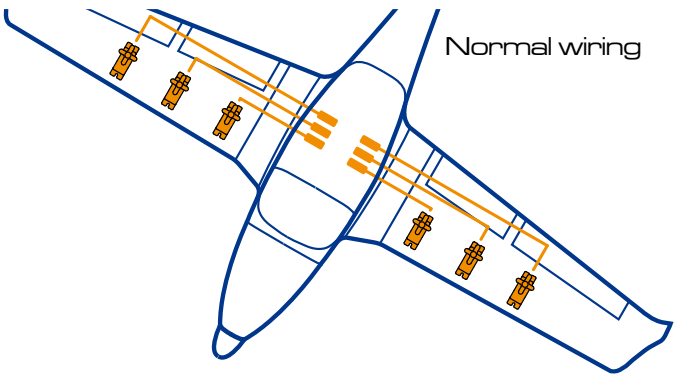
Compact S.BUS receiver

S.BUS

Optimise your wiring

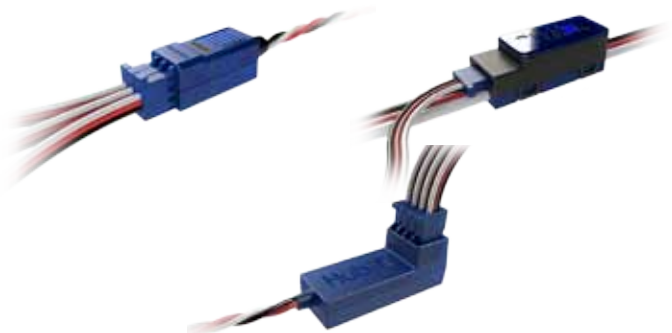
Until now, models with multiple wing-mounted servos were characterised by extremely complex wiring arrangements. The S.BUS changes all that. Individual cables from each servo to the receiver are eliminated, and instead the servos are connected to the S.BUS at any convenient point. As a result, wings fitted with several servos can be connected in a moment - using a single wing connector - when the model is rigged at the flying field. There's nothing else to be done.
The system also eliminates the risk of connecting servos incorrectly, since a channel number is allocated to each servo. In contrast to standard servos, there are no classic individual servo sockets in the S.BUS system.
Information which dictates how far and in which direction the servo is to travel is digitally encoded. The S.BUS data stream contains the travel and directional information for all eighteen servo channels. From the S.BUS data stream the servos search out their own control information, i.e. only the data with the allocated channel number, and carry out the appropriate movements.





S.BUS connectors for every application

The robbe range includes ready-made leads and connectors suitable for virtually every application, and designed for different current levels.
Typical examples are S.BUS wing connectors, a complete 4.1 hub distribution system and S.BUS terminals.
Of course, modellers can also make up all their own cables if they have the appropriate soldering skills and experience.



An S.BUS system can effortlessly be expanded

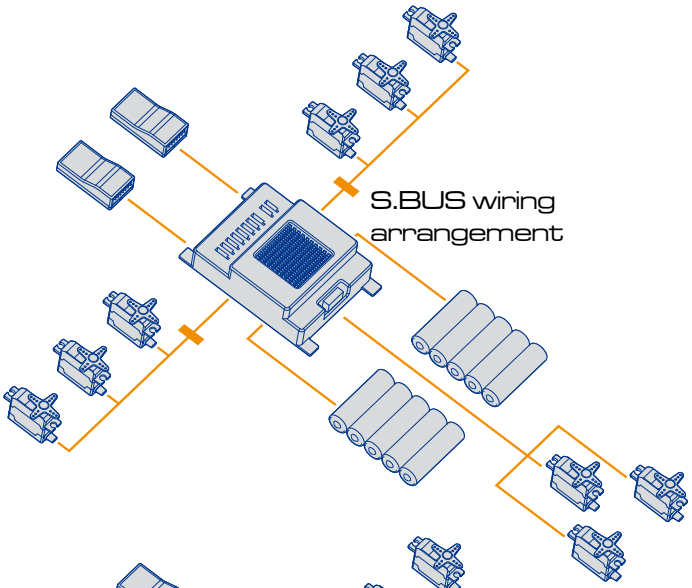
If you wish to install additional components in a model which is already equipped with the S.BUS system, it is no longer necessary to deploy a cable from the new component to the receiver.
The new component can simply be connected to the S.BUS at any point. This means that the S.BUS provides a flexible, future-proof method of fitting out your model.

S.BUS

Save space and weight

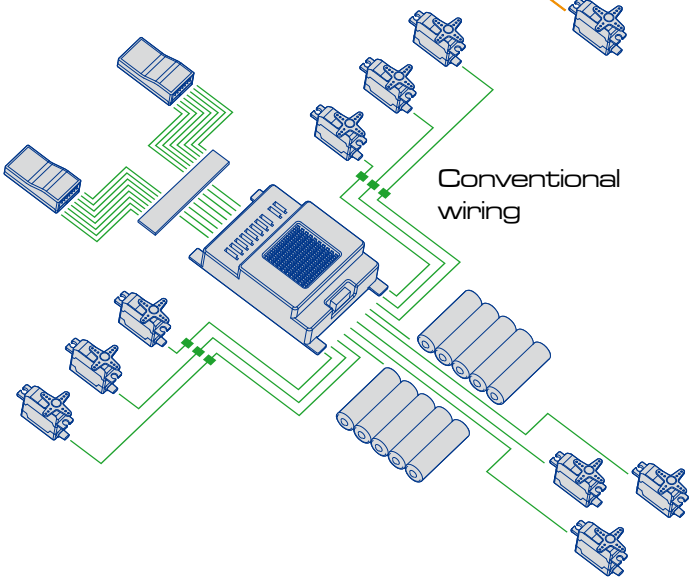
Whether your model is a fixed-wing aircraft, helicopter, boat or car: the lighter it is, the better it flies or runs. If you prefer models with slim fuselages and compact bodywork, you will be delighted at the space saved by the S.BUS.
The revolutionary S.BUS technology offers both advantages: it reduces weight and also creates more space. On the one hand this is due to the greatly simplified wiring, on the other by more compact components. Current S.BUS receivers provide a wider range of functions whilst requiring fewer physical connections, and can therefore be designed as more compact units.
Where fourteen control channels formerly required fourteen physical sockets, a single socket now suffices for eighteen channels.

The S.BUS is also particularly effective in combination with flybarless systems in model helicopters. Just one S.BUS cable carries all the control channels from the receiver to the flybarless unit.



Every servo can be programmed individually

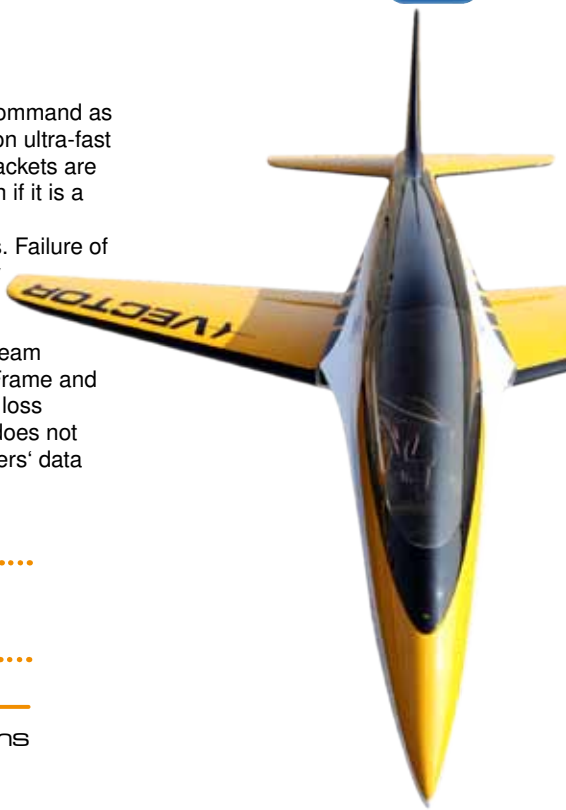
Assigning the channel numbers to the individual components could hardly be easier. There are various convenient methods of doing this: using a PC with S-Link software and the CIU-2 USB adapter (F1405), or using he SBC-1 programming box (F1696), or directly using any transmitter with FASSTest® technology.
It is also possible to program important parameters of S.BUS servos to suit the individual application. For example, you can adjust or set the servo centre point, end-points, start-up power, dead zone, damping, retract mode, overload protection, transit speed or soft-start.
These servo parameters can also be programmed using the S-Link PC software, or directly at a FASSTest® transmitter. Every S.BUS component has an unambiguous ID number which is used to address the component directly for programming. By this means it is possible to assign the channel and program the parameters at any time, e.g. when installed in the model, via the S.BUS cable.

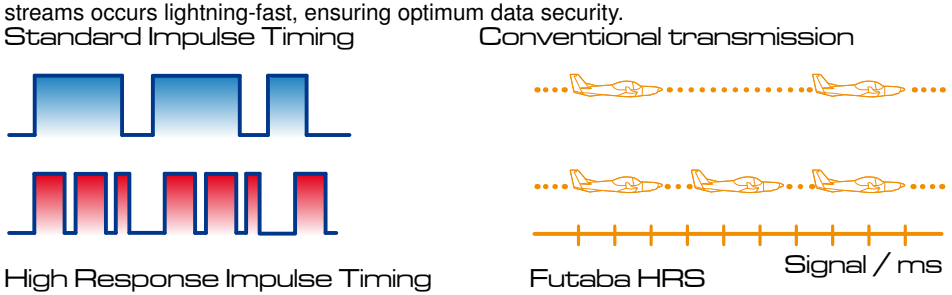


S.BUS

Maximum speed / maximum reliability

For consistent control of the model it is vital that the system should execute every control command as quickly and accurately as possible. robbe / Futaba pilots using the S.BUS system can rely on ultra-fast data transfer which takes a maximum of three milli-seconds. That means: up to 333 data packets are passed on by the receiver every second, guaranteeing perfect handling of your model, even if it is a very high-speed type.
Reliability plays a crucial role in modelling, and especially in the case of large-scale models. Failure of the control technology would have fatal consequences in such cases. For this reason many large models are fitted with two receivers and a backer; this is a requirement for models weighing more than 25 kilogrammes.
This is one area where S.BUS technology offers a decisive advantage. The S.BUS data stream generated by the receiver contains information regarding signal quality in the form of Lost Frame and Lost Signal data. This supplementary information can be used by the backer to detect data loss immediately. Data reconstruction is possible even when individual data packets are lost; it does not have to wait until there is total loss of the receiver signal. Switching between the two receivers' data streams occurs lightning-fast, ensuring optimum data security.





Mix old and new components

The S.BUS system is compatible with standard components, i.e. you can continue to use your conventional servos with an S.BUS system. For such arrangements robbe offers what are known as PWM adapters (PWM = pulse width modulation). If an adapter is used, the adapter itself carries out the addressing. Conventional servos are connected to these adapters in the usual way.
It is also possible to use S.BUS servos with older receivers, since S.BUS servos can process the signals present at conventional receiver outputs in the usual way. Incidentally, current S.BUS servos cost no more than conventional digital servos, but offer the advantage of being programmable, as well as having the pioneering digital S.BUS interface.

SBE1 S.BUS PWM converter
Art. No. F1711

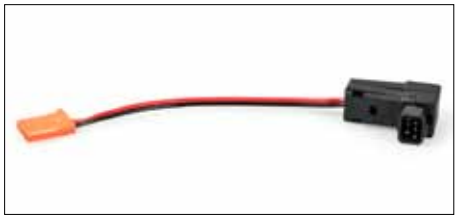
SBC1 S.BUS PWM adapter
Art. No. F1695

SBE S.BUS expander, four-channel
Art. No. 8885

S.BUS1 and S.BUS2

Current S.BUS components are designated S.BUS2; earlier components are marked S.BUS.
The difference: S.BUS2 is bi-directional. This means that telemetry data is passed from the components to the receiver, as well as the control signals from the receiver to the components, using the same cable.
All current S.BUS2 servos can be operated with an S.BUS(1) system, but this does not work the other way around. Telemetry receivers feature S.BUS and S.BUS2 sockets. All currently available robbe / Futaba components operate using the S.BUS2 standard.

RC accessories



S.BUS trainer lead No. F1263

S.BUS trainer lead.
This lead can be used to convert any S.BUS receiver - whether S-FHSS, FASST or FASST-Test® - into a wireless Trainer system. Of course, the S.BUS receiver to be used must operate on the same modulation as the Pupil transmitter, and must be bound to it. Power is supplied via the lead from the Trainer socket. All other settings are entered in the Trainer menu at the Teacher transmitter in the usual way. This forms a simple method of setting up a wireless Trainer system which operates with all modes of modulation. At the same time the channel count is increased to max. sixteen channels, depending on the type of modulation. Safety function: if the Pupil transmitter is switched off, the software automatically switches to the Teacher transmitter's control signal.

Lithium battery, 2S 2600 mAh T8 No. 45591000

Replacement 2S / 2600 mAh Lithium transmitter battery for T8FG and T8FG Super transmitters.
High-capacity Lithium battery for long duration. The battery is fitted with an internal protective circuit which guards against overcharging and deep-discharging.
The special plug-type 8.4 V- 500 mA LiPo charger, No. 8298, is recommended for charging this battery.

Specification:

Weight approx.	96 g
Capacity	2600 mAh

Futaba ZH patch lead, 100 mm No. F1818100

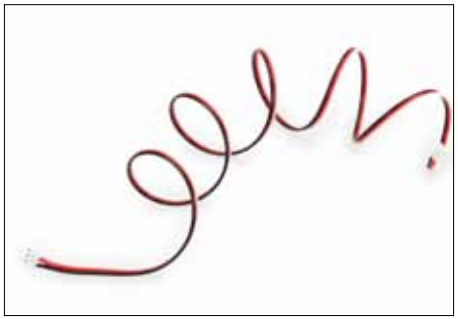
Futaba ZH patch lead, 150 mm No. F1818150

Futaba ZH patch lead, 200 mm No. F1818200

Futaba ZH patch lead, 250 mm No. F1818250

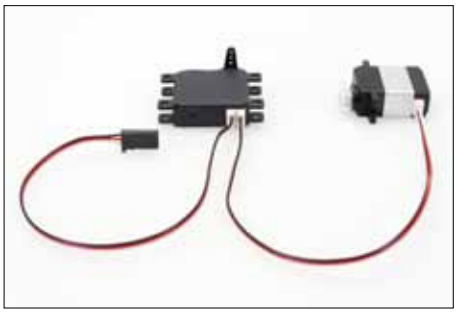
Futaba ZH patch lead, 300 mm No. F1818300

Plug-in Futaba-ZH lead for SVi servos. 0.14 mm².



ZH-ZH servo patch lead, 3-pole, 400 **No. F1819400**
ZH-ZH servo patch lead, 3-pole, 500 **No. F1819500**
ZH-ZH servo patch lead, 3-pole, 600 **No. F1819600**

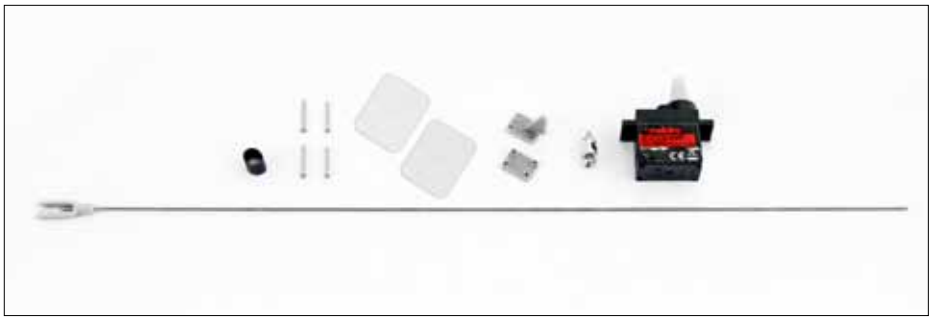
Plug-in Futaba-ZH lead for SVi servos. 0.14 mm².



Servo mounting frame, S3150 BB pack of 2 **No. 8889**

Practical servo mounting frame with output shaft bracing ballrace for 11 mm wing servos.
The practical method of mounting servos in the wings. The servo frame adds no height: servo thickness = installed thickness!
Rapid servo installation and removal in the case of gearbox damage, if the neutral point has to be altered, or if the servo is to be replaced. Just undo two screws.
Fits S 3150, S 3155, S3171, S3172 and S3174 servos.
Dimensions: 53.5 x 56.5 mm
Weight: approx. 7 g
Contents: 1 pair

RC accessories



Rudder upgrade kit for the whole robbe Nano-Racer series

No. 2600

Nano-racers without a rudder - that was yesterday!
The rudder upgrade kit for your Nano-Racer provides a quick and easy method of fitting a working rudder. The extra function enormously increases your model's fun factor. Knife-edge flight, slow rolls and stall turns are easy to accomplish, as are all other manoeuvres which require a rudder.

The upgrade kit contains all the components required to install a working rudder, and is so flexible that it can be used for all models in the Nano-Racer series.

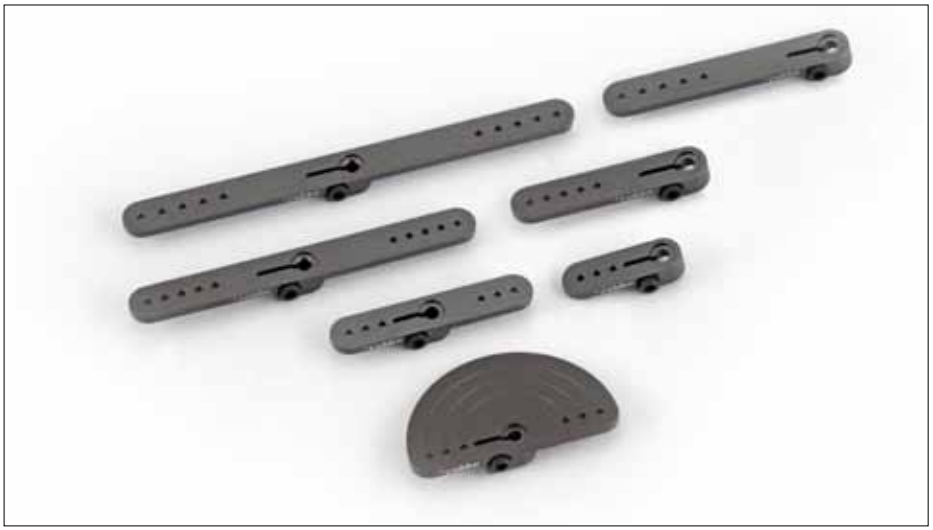
Set contents
- 9 g servo
- 300 mm pushrod
- Clevis
- Heat-shrink sleeve
- Pushrod connector
- Control surface horn
- 2 screws
- 2 point-hinges
- Installation instructions

Aluminium transmitter case, Megatech T-4PKSR

No. F1835

Alu case for Futaba Pistolgrip radio T4PKS-R.

Dimensions: ca: 38 x 26 x 21 cm



Aluminium servo output lever

The new range of robbe aluminium servo output levers comprises seven different devices. They are designed to cope with the most severe stresses, and are made of heavy-duty AL7075 aluminium alloy. They feature an elegant, restrained titanium grey anodised finish. To ensure an efficient connection with the servo output shaft (25-tooth), the new line of aluminium servo output levers also feature a tangential clamp with a 3 mm socket-head screw.The servo output arms are available in various sizes to suit the standard robbe / Futaba splined shaft of 5.95 mm diameter. They are 2.5 mm thick, are 6.5 mm high, and are bored 1.5 mm. This makes them versatile enough for any application.

Detail picture of the tangential screw-clamp

Detail picture of splined socket (25-tooth)

Typical application (servo not supplied)

Aluminium servo output lever round 180° 49mm **No. 8991**

Aluminium servo output disc, 180°, 49 mm
Specification:
Overall disc diameter: 49 mm
Number of linkage holes: 6, 3 per side
Distance, servo screw to first hole: 12 mm
Hole spacing: 4 mm
Weight incl. 3 mm socket-head screw: approx. 9 g
Set contents:
1 x Servo output disc
1 x Socket-head screw, 3 x 8 mm

Aluminium servo output lever, single-arm, 29 mm (25-tooth) **No. 8992**

Aluminium servo output lever, single-arm, 29 mm
Specification:
Overall lever length: 29 mm
Number of linkage holes: 3
Distance, servo screw to first hole: 12 mm
Hole spacing: 4 mm
Weight incl. 3 mm socket-head screw: approx. 3 g
Set contents:
1 x servo output lever
1 x socket-head screw, 3 x 8 mm

RC accessories

Aluminium servo output lever, double-arm, 49 mm (25-tooth)

No. 89922000

Aluminium servo output lever, double-arm, 49 mm
Specification:

Overall lever length:	49 mm
Number of linkage holes:	6; 3 per side
Distance, servo screw to first hole:	12 mm
Hole spacing:	4 mm
Weight incl. 3 mm socket-head screw:	approx. 5 g

Set contents:
1 x servo output lever
1 x socket-head screw, 3 x 8 mm

Aluminium servo output lever, double-arm, 86 mm (25-tooth)

No. 89932000

Aluminium servo output lever, double-arm, 86 mm
Specification:

Overall lever length:	86 mm
Number of linkage holes:	10; 5 per side
Distance, servo screw to first hole:	22 mm
Hole spacing:	4 mm
Weight incl. 3 mm socket-head screw:	approx. 7 g

Set contents:
1 x servo output lever
1 x socket-head screw, 3 x 8 mm

Aluminium servo output lever, double-arm, 113 mm (25-tooth)

No. 89942000

Aluminium servo output lever, double-arm, 113 mm
Specification:

Overall lever length:	113 mm
Number of linkage holes:	10; 5 per side
Distance, servo screw to first hole:	22 mm
Hole spacing:	4 mm
Weight incl. 3 mm socket-head screw:	approx. 9 g

Set contents:
1 x servo output lever
1 x socket-head screw, 3 x 8 mm

Aluminium servo output lever, single-arm, 47 mm (25-tooth)

No. 8993

Aluminium servo output lever, single-arm, 47 mm
Specification:

Overall lever length:	47 mm
Number of linkage holes:	5
Distance, servo screw to first hole:	22 mm
Hole spacing:	4 mm
Weight incl. 3 mm socket-head screw:	approx. 5 g

Set contents:
1 x servo output lever
1 x socket-head screw, 3 x 8 mm

Aluminium servo output lever, single-arm, 61 mm (25-tooth)

No. 8994

Aluminium servo output lever, single-arm, 61 mm
Specification:

Overall lever length:	61 mm
Number of linkage holes:	5
Distance, servo screw to first hole:	32 mm
Hole spacing:	5 mm
Weight incl. 3 mm socket-head screw:	approx. 7 g

Set contents:
1 x servo output lever
1 x socket-head screw, 3 x 8 mm

Telemetry sensors

SBS-01V voltage sensor

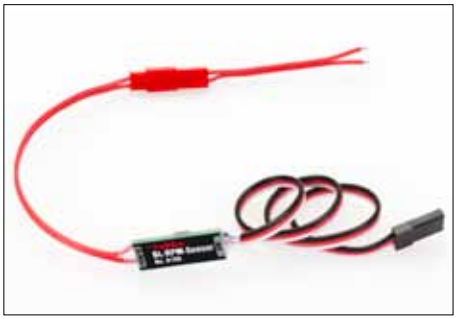
No. F1735

Voltage sensor, 0..100 V-DC.
Voltage sensor for the Futaba S.BUS2 telemetry system. Can be used with T18MZ, FX-32, T14SG and T4PLS transmitters. Equally suitable for fixed-wing model aircraft, helicopters, boats and cars. Including 50 cm connecting lead and 1 A fuse.

Measurement ranges:	
External:	0...100 V DC
Internal:	3.7...8.4 V DC
Dimensions:	approx. 40 x 11 x 5 mm
Weight:	approx. 6 g
Operating voltage	3.7...7.4 V
Current drain:	approx. 8 mA

Replacement RPM sensor SBS01RM / CGY750

No. F1732100



BL-RPM-Sensor

No. 8166

BL motor rpm sensor for the CGY750/E flybarless system

This sensor directly measures the rotational speed of a brushless electric motor from two of the motor wires, and passes the data to the governor input of the CGY750 / E flybarless gyro system.
The gyro system's speed governor has a very significant supporting effect on the electronic speed controller's regulatory characteristics. The result of the direct rpm measurement is much faster regulatory response.
The remaining swashplate control functions are also analysed, allowing the regulatory behaviour to be optimised to match the flight situation.
A further positive side-effect is longer flight times.
It is possible to call up different rotational speeds per flight mode from the transmitter using a separate control channel.
Also suitable as sensor for the magnetic rpm sensor (No. F1732).

Measurement range:	1000...300,000 rpm
Dimensions:	23 x 10 x 2 mm
Cell count, motor:	2...14S
Operating voltage:	3.7...7.4 V
Current drain: approx.	1...5 mA
Temperature range:	-15...+55° C

Telemetry sensors

True Airspeed Sensor 450

No. F1677

Measure the exact speed. The robbe-Futaba True Airspeed Sensor 450 for the S.BUS system provides an exact measurement of the model‘s speed through the air by accurately monitoring the dynamic and ambient air pressure.

The dynamic air pressure (caused by the model‘s airspeed) is measured by what is known as a Prandtl tube, and the differential pressure is measured by additional annular jets. The special construction of the jets reduces the system‘s sensitivity to fluctuations in pressure and airflow in the model‘s fuselage. The net result is that the model‘s actual speed is measured compared with the surrounding air. The dynamic and differential pressure are fed to the digital pressure sensor in the electronics box via two thin silicone hoses. From this data a micro-processor calculates the model‘s airspeed relative to the air. The data is then passed to the receiver via the S.BUS2 interface, and from there to the transmitter‘s integral screen. Since air pressure varies according to the height of the flying site above mean sea level it is also necessary to „zero“ the sensor to the altitude of the flying site in order to obtain accurate speed measurements. This is accomplished very conveniently by pressing the Reset button on the electronics box. For simplicity of operation this button can also be accessed remotely via an external switch in the model, as a socket is available for this purpose. Since the True Airspeed measurement of speed is so accurate, it can be exploited for such purposes as checking the critical minimum approach speed, in order to prevent the model stalling on the landing approach due to insufficient speed.

Specification
Dimensions

Electronics box:	25 x 25 x 15 mm
Weight:	approx. 12 g
Prandtl tube:	D 4 x 65 mm
Weight:	approx. 4 g
Measurement range:	approx. 30…450 km/h

Receiver

Receiver R304SB 2.4 GHz T-FHSS®

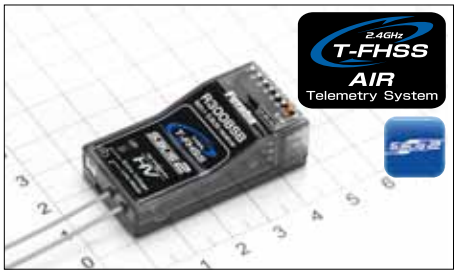
No. F1022

Small, lightweight 2.4 GHz T-FHSS® four-channel receiver with telemetry transmitter, incorporating Frequency Hopping technology.

Four-channel T-FHSS® receiver with four sockets for normal servos and speed controllers. With supplementary S.BUS2 output for connecting S.BUS2 devices such as servos and telemetry sensors.
The receiver's internal telemetry transmitter sends the data to the ground by radio, where the information is displayed on the transmitter's screen.
2.4 GHz FHSS technology ensures good rejection of general and background interference.
Suitable only for T-FHSS® systems (T4PLS).
Not recommended for large-scale model aircraft and jets.

Specification:

Frequency band	2.404 ... 2.4475 GHz
Spot frequencies	30
Channel count	4
Channel spacing	1500 kHz
Transmission system	FHSS, S-FHSS, T-FHSS®
Voltage	4.8...7.4 Volt (4 - 5 Nx, 2 LiFe, 2 LiPo)
Current	40 mA
Dimensions	35.1 x 23.2 x 8.5 mm
Aerial length	17 cm
Weight approx.	6,6 g



Receiver R3008SB 2.4 GHz T-FHSS®

No. F1027

R3008SB 2.4 GHz, T-FHSS® compact, lightweight ten-channel receiver with integral telemetry transmitter.

In spite of its small size of only 47.3 x 24.9 x 14.3 mm and a weight of just 11 g the R3008SB receiver is a multi-talented device. It features an integral telemetry transmitter, and can send up to 32 telemetry data sets to the ground over a range of up to 1000 m. Naturally the receiver features eight PWM outputs for normal servos. Channel 8 is switchable to S.BUS(1) mode, enabling up to ten S.BUS(1) servos or other devices to be connected to this output.
The switched channels 9 and 10 can only be accessed via the S.BUS 1 or 2 output, and require suitable S-BUS compatible devices / servos. Both S-BUS2 servos and sensors can be connected to the separate bi-directional S.BUS2 socket; up to 32 telemetry channels can be transmitted. The integral transmitter sends the telemetry data present at the S.BUS2 socket to the T-FHSS® transmitter, where the data are displayed on-screen or generated in audible form (speech, vibration alarm, sound or beeper). When the receiver is connected, data such as receiver battery voltage, external voltage (max. 70 V DC) and aerial signal strength, i.e. the essential telemetry data, are automatically transmitted to the ground. This receiver „only" works with the new telemetry-capable T-FHSS® transmitters. It is not compatible with FASST or FASSTest® or S-FHSS transmitters or these types of modulation.

Recommended accessories: F1001100 „Extra Voltage" connecting lead with fuse.

Specification:

Frequency band	2,4GHz T-FHSS®
Spot frequencies	31
Channel count	10
Channel spacing	2000 kHz
Transmission system	T-FHSS®
Voltage	3,7...7,4 Volt (4-5Nx, 2 LiFe, 1-2 LiPo)
Current	50 mA
Dimensions	47 x 25 x 14,3 mm
Aerial length	14 cm
Weight approx.	11 g

HV-S.BUS-Servos

Servo S3173SVi

No. F1819

10.8 mm - 43 Ncm - 0.12 sec - BB - MG - HV - S.BUS2
HV-S.BUS2 variant of the proven S3150 digital servo. New - even faster and more powerful. With plug-in connecting lead. A new type of motor makes the servo more powerful and about 30% faster. The set-up has been selected in such a way that it can be operated directly with 2S LiPo batteries as well as with conventional 5.7 ... 6 V BEC systems. At 0.15 sec. / 45° this servo is significantly faster even than the S3150 in 6 V BEC mode. A successful combination for LV and HV applications. The servo features mounting lugs on both sides for horizontal installation, eliminating the need for a servo frame. The connecting lead plugs into the servo case, which also features a second socket in the bottom for looping the S.BUS connection through to the next servo. Ideal as a wing servo, even for large gliders and competition machines, and also for mini and micro helicopters. With the S.BUS2 standard, but can also be operated in conjunction with normal receivers.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	35Ncm/39Ncm/43Ncm
Transit speed	0,15s / 45°/0,135s/45°/0.12 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	19,5 g
Dimensions	30 x 10.9 x 29.1 mm

Servo S3174SV

No. F1820

10.8 mm - 43 Ncm - 0.12 sec - BB - MG - HV - S.BUS2
HV-S.BUS2 variant of the proven S3150 digital servo. New - even faster and more powerful. With fixed servo lead. This is the HV-S. BUS2 version of the robust, proven S3150 wing servo. A new type of motor makes the servo more powerful and about 30% faster. The set-up has been selected in such a way that it can be operated directly with 2S LiPo batteries as well as with conventional 5.7 ... 6 V BEC systems. At 0.15 sec. / 45° this servo is significantly faster even than the S3150 in 6 V BEC mode. A successful combination for LV and HV applications. The servo features conventional mounting lugs for upright installation. The connecting lead is fixed. Ideal as a wing servo, even for large gliders and competition machines, and also for mini and micro helicopters. With the S.BUS2 standard, but can also be operated in conjunction with normal receivers.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	35Ncm/39Ncm/43Ncm
Transit speed	0,15s / 45°/0,135s/45°/0.12 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	20,6 g
Dimensions	30 x 10.9 x 29.1 mm

HV-S.BUS-Servos

Servo S3270SVi

No. F1825

11.8 mm - 30 Ncm - 0.08 sec - BB - MG - HV - S.BUS2
New, powerful 12 mm servo with metal gears and aluminium central case section.
The S3270SV is an HV S.BUS2 servo with metal gears and aluminium central case section. High output torque of 30 Ncm, and very fast at 0.08 sec/45°.
The motor set-up has been selected in such a way that it can be operated in LV mode (5.7 ... 6 V BEC) with ample power and speed, as well as HV mode, i.e. directly with 2S LiPo batteries.
The servo connecting lead of the SVi version plugs into the servo, making installation and cable deployment easier.
Typical applications include:
wing / flap servo for gliders, elevator servo for medium and large gliders.
Elevator servo for F3A machines.
Swashplate / tail rotor servo for 450-size helicopters, etc.
Programmable

Length of connecting lead: approx. 200 mm

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	23Ncm/26Ncm/30Ncm
Transit speed	0,1s / 45°/0,093s/45°/0.082 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	16,2 g
Dimensions	23 x 11.8 x 28.8 mm

Servo S3270SV

No. F1821

11.8 mm - 30 Ncm - 0.08 sec - BB - MG - HV - S.BUS2
The S3270 is Futaba's first 12 mm class servo. The S3270SV is an HV S.BUS2 servo with metal gears, aluminium central case section, and the enormous output torque of 30 Ncm. At the same time the servo is very fast at 0.08 sec. / 45°. The motor set-up has been selected in such a way that it can be operated in LV mode (5.7 ... 6 V BEC) with ample power and speed, as well as HV mode, i.e. directly with 2S LiPo batteries. Typical applications are wing servo for gliders, elevator servo for medium and large gliders. Elevator servo for F3A machines. Swashplate servo for 450-size helicopters, etc.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	23Ncm/26Ncm/30Ncm
Transit speed	0,1s / 45°/0,093s/45°/0.082 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	16,2 g
Dimensions	23 x 11,8 x 28,8 mm

HV-S.BUS-Servos

BLS671SVi servo

No. F1814

15 mm - 83 Ncm - 0.08 sec - BB - MG - HV - S.BUS2 - BL
Powerful and very fast steering servo for 1:12 model cars with brushless motor and HV, plus plug-in lead at the servo. This servo is only 15 mm „thick“, but generates the enormous output torque of 62 Ncm. The ideal steering servo for competition RC model cars. For direct operation with 2S LiPo batteries.
HV S.BUS2 version of the BLS651 LV servo.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	67Ncm/74Ncm/83Ncm
Transit speed	0,09s/45°/0,082s/45°/0.09 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	28 g
Dimensions	33 x 15 x 27.1 mm

BLS671SV servo

No. F1816

15 mm - 83 Ncm - 0.08 sec - BB - MG - HV - S.BUS2 - BL
Powerful and very fast steering servo for 1:12 model cars with brushless motor and HV. This servo is only 15 mm „thick“, but generates the enormous output torque of 62 Ncm. The ideal steering servo for competition RC model cars. For direct operation with 2S LiPo batteries. HV S.BUS2 version of the BLS651 LV servo.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	67Ncm/74Ncm/83Ncm
Transit speed	0,09s/45°/0,082s/45°/0.09 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	30 g
Dimensions	33 x 15 x 27.1 mm

HV-S.BUS-Servos

S3073SV servo

No. F1807

20 mm - 39 Ncm - 0.12 sec - BB - HV - S.BUS
High-voltage S.BUS version of the proven, all-purpose S3151 servo. An all-purpose servo for many applications in the whole of modelling, including simple glow-powered helicopters. The output shaft is supported in one ballrace and a special double bush. Wireless assembly technology for particularly good vibration resistance. Direct operation with 2S LiPo batteries. A special potentiometer ensures positional accuracy and reliable centring.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	31Ncm/35Ncm/39Ncm
Transit speed	0,15s/45°/0,135s/45°/0,12 s/45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	41 g
Dimensions	40,5 x 20 x 36,8 mm

Servo S3470SV

No. F1823

20 mm - 96 Ncm - 0.09 sec - BB - MG - HV - S.BUS2
High-voltage S.BUS version of the powerful 100 Ncm S3305 metal-geared power servo. The metal gearbox features two ballraces and is of extremely robust construction, making the servo ideal for use in model cars. However, it is also suitable for any other area of modelling where high power is required. Replaces the two earlier HV versions: S3051HV and S3071HV-SB. A special potentiometer ensures positional accuracy and reliable centring.
Programmable!

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	80Ncm/88Ncm/96Ncm
Transit speed	0,105s/45°/0,095s/45°/0.095 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	43 g
Dimensions	40 x 20 x 38.1 mm

HV-S.BUS-Servos

Servo S9370SV

No. F1824

20 mm - 168 Ncm - 0.08 sec - BB - MG - HV - S.BUS2
Programmable High Voltage / S.BUS car servo, with metal gears and aluminium case centre section. Car servo with the high torque of 160 Ncm, with twin-ballraced metal gearbox. For HV application, i.e. up to 2S LiPo battery. With S.BUS2 socket, therefore can also be connected to normal receivers. Programmable from the transmitter or a PC. A special potentiometer ensures positional accuracy and reliable centring.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	138Ncm/150Ncm/168Ncm
Transit speed	0,098s/45°/0,089s/45°/0.083 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	61 g
Dimensions	40 x 20 x 38.1 mm

Servo BLS276SV

No. F1817

20 mm - 50 Ncm - 0.04 sec - BB - MG - HV - S.BUS2 - BL
Powerful, ultra-fast High Voltage (HV) digital tail rotor servo with brushless motor, metal gears and twin ballraces. High Voltage version of the proven BLS251 servo, now compatible with the S.BUS system. Only for use as tail rotor servo with gyros which can process the 760 µs neutral pulse width, such as GY601, GY611, GY520, GY701 or CGY750. The central case section is made of aluminium, and serves to cool the brushless motor.
Programmable

Specification:	
Nominal voltage	6Volt/6,6Volt/7,40Volt
Torque	40Ncm/44,5Ncm/50Ncm
Transit speed	0,046s/45°/0,042s/45°/0.038 s / 45°
Operating voltage	6...7,4 Volt
No. of cells	5 NiMH, 2S LiFe / LiPo
Weight approx.	60 g
Dimensions	40 x 20 x 36.8 mm

LV-S.BUS-Servos

Servo BLS251SB

No. F1822

20 mm - 47 Ncm - 0.04 sec - BB - MG - S.BUS2 - BL
Powerful, ultra-fast digital tail rotor servo with brushless motor, metal gears and twin ballraces. Successor to the proven BLS251 servo, now compatible with S.BUS. Only for use as tail rotor servo with gyros which can process the 760 µs neutral pulse width, such as GY601, GY611, GY520, GY701 or CGY750. The central case section is made of aluminium, and serves to cool the brushless motor.
Programmable

Replacement parts
BLS 251 gear set, 611 tail gyro1x F1396100

Specification:	
Nominal voltage	4,8Volt/6Volt
Torque	38Ncm/47Ncm
Transit speed	0,045s / 45°/0,038s/45°
Operating voltage	4,8-6 Volt
No. of cells	4...5 NC / NiMH
Weight approx.	61 g
Dimensions	40 x 20 x 36.8 mm

Of course, all S.BUS servos can also be connected to conventional receivers with PWM modulation.

The servos can be addressed in various ways:
1. Via the S.BUS receiver
2. Using the compact SBC-1 programmer No. F1696
3. Using PC-Link software, for which the CIU-2 USB adapter, No. F1405, is required.
4. At the S.BUS socket of new transmitters such as the T10J, T14SG, T18MZ, FX-32, FX-22 etc.

All S.BUS servos are also programmable.
The following functions are user-variable:
- S.BUS channel assignment
- Servo reverse
- Soft start, on / off
- Mode select if signal fails, hold or free
- Smooth servo running, on / off
- Servo position (servo tester)
- Servo centre offset +/- 300 µs (approx. 30 degrees)
- Servo transit speed, 0.39...9 seconds per 45 degrees
- Dead zone adjustment
- Servo travel adjustment, left and right separately, approx. 50...175%
- Initial power
- Damping
- Holding power
- ID storage

The servos can also be programmed once installed and connected by calling up the servo‘s individual ID and addressing it.

New:
- Using the new T18MZ and FX-32 FASSTest® radio control systems the new S.BUS2 servos (SV) can now also be programmed as retract servos (zero current after fifteen seconds).
- Alternatively current overload protection O.L.P. can be set
- SBUS2 servos (SV) can be operated at the receiver‘s S.BUS1 or S.BUS2 output. If the S.BUS2 system is used, mixed operation with telemetry sensors is also possible.

Powerbox iGyro inkl. GPS

No. 6700

PowerBox iGyro ohne GPS

No. 6701

The digital PowerBox triple-axis gyro system incl. GPS!
The PowerBox iGyro SRS is a completely new type of gyro system for fixed-wing model aircraft. At the development stage top priority was given to maximum flexibility combined with simplicity of operation. The regulatory algorithm, specifically developed for fixed-wing model aircraft, hardly changes the model's familiar flying characteristics at all, but its flight pattern is much smoother, more precise and less susceptible to weather-induced or aerodynamic influences. The need for mixers such as elevator to rudder, or elevator to landing flaps, is completely eliminated. In contrast to previous gyro systems, the latest servo bus technology reduces the immensely complex wiring to a minimum. The gyro gain adjuster can be assigned to any channel. This makes it possible to set up the optimum gyro effect accurately in just one brief flight. Gain and direction of effect can be adjusted separately for each of the five outputs. The separate GPS sensor provides constant gyro stabilisation in all speed ranges, and effectively prevents over-controlling and oscillation at high speed. Menu-based operation on the graphic OLED screen makes all adjustment work quicker.

Functions:
- Extremely accurate triple-axis MEMS sensor
- Special regulatory algorithm for fixed-wing model aircraft
- Three-stage flight phase switching
- Three axes shared amongst five servos, each adjustable independently of the others
- GPS-controlled gyro gain
- integral Delta mixer
- Freely selectable installed orientation
- Graphic OLED screen with 128 x 64 pixels
- Ultra-simple menu-based programming using the SensorSwitch
- SRS technology for Futaba S-Bus
- Unrestricted channel assignment
- Digital output for further processing in SRS PowerBox systems
- 16-bit processor for fast, high-resolution signal processing
- Settings can be backed up and restored using a PC
- Can be updated using the PowerBox USB interface adapter
- Additional supported bus systems: Spektrum DSM2 / DSMX, HoTT, M-Link and Jeti
- Robust aluminium case

Specification No. 6700:
- Operating voltage: 4.0 V - 9.0V
- Current drain, iGyro: 51 mA
- Current drain, GPS: approx. 60 mA
- Max. current: min. 10 A
- Dropout voltage: 0.3 V
- Receivers: 2, via serial inputs
- Gyro sensor type: MEMS
- Number of sensor axes: 3
- Gyro regulation: Heading and Normal modes
- Channels: 18
- Servo outputs: 5
- Servo signal resolution: 0.5 µs
- Signal frame rate: 18 ms
- Screen: graphic OLED 128 x 64 pixels
- Dimensions: 52 x 35 x 14
- Weight incl. GPS sensor: 50 g
- Temperature range: -30°C to +75°C

Specification No. 6701:
- Operating voltage: 4.0 V - 9.0V
- Current drain, iGyro: 51 mA
- Max. current: min. 10 A
- Dropout voltage: 0.3 V
- Receivers: 2, via serial inputs
- Gyro sensor type: MEMS
- Number of sensor axes: 3
- Gyro regulation: Heading and Normal modes
- Channels: 18
- Servo outputs: 5
- Servo signal resolution: 0.5 µs
- Signal frame rate: 18 ms
- Screen: graphic OLED 128 x 64 pixels
- Dimensions: 52 x 35 x 14
- Weight without GPS sensor: 35 g
- Temperature range: -30°C to +75°C

Electronic accessories

PowerBox Evolution No. 6706

The smallest and lightest high-capacity power supply with linear regulated voltage for receiver and servos!
Specification:

- Double linear-stabilised voltage of 5.90 Volt for receiver and servos
- Current capacity max. 2 x 10 Ampere
- For 7.4 Volt LiPo batteries or 5 NC or NiMH cells
- 6 control channels accessed remotely from the receiver
- 6 two-way signal amplifiers
- 16 servo sockets on the backer
- Interference suppression on all 16 servo inputs (no ferrite rings required)
- Independent IC-controlled voltage monitors (LED chains)
- 2 external ultra-bright warning LEDs
- Minimum value memory (low voltage memory) for both batteries, can be read out individually
- 2 integral electronic switches, controlled using the SensorSwitch
- Working voltage: 4.0 V to 9.0 V
- Temperature range -10° to + 55°C
- Voltage loss 0.35 Volt
- Current drain 25 mA
- Weight only 115 grammes, complete with all cables and SensorSwitch

PowerBox Competition SRS

No. 6707

Robbe/Futaba S-Bus diversity receiver backer for connecting 18 PWM servos!
Functions:

- SRS - Serial Receiver System for connecting robbe/Futaba S.Bus receivers in order to exploit receiver diversity
- Unrestricted channel assignment of the PowerBox outputs
- Integral high-resolution graphic OLED screen with 128 x 64 pixels
- Particularly user-friendly: menu-controlled programming using the SensorSwitch
- Fourteen channels
- Signal amplification, interference suppression for all fourteen channels and eighteen servos
- Synchronised servo output for totally parallel servo movements
- Flight recorder, lost frame / fail-safe event recorder for the receivers in use
- User-variable frame rate, range 9 ms - 21 ms
- 16-bit processor for fast, high-resolution signal processing
- Four match-channels, each for two servos. All eight servos can be adjusted accurately
- Double-regulated output voltage for receivers and servos
- Socket for Spektrum, Multiplex MSB, HoTT, Weatronic downlink channel bus systems
- Battery voltage and capacity can be transmitted directly to the transmitter
- Voltage and capacity display for each battery separately
- Software-selectable servo voltage: 5.9 V or 7.4 V
- Minimum value memory shows any voltage collapses
- Large-area heat-sinks for high regulator capacity
- Regulator monitor and regulator error indicator
- Support for three different battery types: LiPo, NiMH / NiCd, LiFePo
- Suppression of servo feedback currents which may occur
- Further use for receivers with serial interface: Spektrum DSM 2 and DSM X, Multiplex M-Link, Jeti R-Sat, HoTT, Weatronic.
- Can be updated using PowerBox Systems USB interface adapter

Specification:

- Operating voltage: 4.0 Volt to 9.0 Volt
- Power supply: 2 x 2-cell 7.4 Volt LiPo battery; 2 x 5-cell NiCd / NiMH battery; 2 x 2-cell LiFePo battery (A123)
- Current drain: approx. 125 mA when switched; approx. 33 µA when switched off
- Dropout voltage: approx. 0.25 V
- Max. receiver and servo current 2 x 10 A (stabilised), depending on cooling: peak 2 x 20 A
- Resolution, servo signals: 0.5 µs
- Signal frame rate: 9 ms, 12 ms, 15 ms, 18 ms, 21 ms
- Screen: OLED 128 x 64 pixels, graphic
- Servo sockets: 21 sockets, 12 channels
- Temperature range: -30°C to +75°C
- Weight: 115 g
- SensorSwitch: 15 g

Set contents:

- PowerBox Competition SRS
- 2 patch-leads
- SensorSwitch
- 4 rubber grommets and brass spacers, pre-fitted
- 4 retaining screws
- Operating instructions

Electronic accessories

PowerBox Champion SRS

No. 6708

Robbe/Futaba S-Bus diversity receiver backer for connecting 24 PWM servos and Robbe/Futaba S-Bus servos to the Robbe/Futaba S-Bus!
New functions:
- Independent outputs for : 2 x aileron; 2 x elevator; 2 x rudder
- Door sequencer: 6 x freely programmable outputs, with set-up assistant
- robbe/Futaba S.Bus (PowerBus): 2 outputs, 16 + 2 channels, compatible with other servo bus systems
- Servo-match function: centre, end-points and reverse for all 24 outputs

Specification:
- Operating voltage: 4.0 V - 9.0 V
- Power supply: 2 x 5S NiMH / NiCd, 2S LiPo, 2S LiFePo
- Current drain, operating: approx. 185 mA
- Idle current: approx. 30 µA
- Output voltage: 5.9 V and / or 7.4 V stabilised
- Current capacity: peak 4 x 20 A
- Dropout voltage: 0.3 V
- Servo signal resolution: 0.5 µs
- User-variable frame rate: 9 ms, 12 ms, 15 ms, 18 ms, 21 ms
- Screen: LCD 128 x 64 pixels, graphic
- Servo sockets: 24 sockets
- Channels: max. 18
- Telemetry: Spektrum, Hott, M-Link, others to follow
- Dimensions: 136 x 83 x 20 mm
- Weight incl. screen and switch: 250 g
- Temperature range: -30°C to +75°C

PowerBox Royal SRS

No. 6709

Robbe/Futaba S-Bus diversity receiver backer for connecting 24 PWM servos and Robbe/Futaba S-Bus servos to the Robbe/Futaba S-Bus, including triple-axis gyros and GPS!
New functions:
- Integral iGyro: triple-axis gyro system with Heading function, set-up assistant and GPS
- Independent outputs for : 2 x aileron; 2 x elevator; 2 x rudder
- Door sequencer: 6 x freely programmable outputs, with set-up assistant
- robbe/Futaba S.Bus (PowerBus): 2 outputs, 16 + 2 channels, compatible with other servo bus systems
- Servo-match function: centre, end-points and reverse for all 24 outputs

Specification:
- Operating voltage: 4.0 V - 9.0 V
- Power supply: 2 x 5S NiMH / NiCd, 2S LiPo, 2S LiFePo
- Current drain, operating: approx. 185 mA
- Idle current: approx. 30 µA
- Output voltage: 5.9 V and / or 7.4 V stabilised
- Current capacity: peak 4 x 20 A
- Dropout voltage: 0.3 V
- Servo signal resolution: 0.5 µs
- User-variable frame rate: 9 ms, 12 ms, 15 ms, 18 ms, 21 ms
- Screen: LCD 128 x 64 pixels, graphic
- Servo sockets: 24 sockets
- Channels: max. 18
- Telemetry: Spektrum, Hott, M-Link, others to follow
- Dimensions: 136 x 83 x 20 mm
- Weight incl. screen and switch: 250 g
- Temperature range: -30°C to +75°C

Electronic accessories

PowerBox Royal SRS ohne GPS

No. 6710

Robbe/Futaba S-Bus diversity receiver backer for connecting 24 PWM servos and Robbe/Futaba S-Bus servos to the Robbe/Futaba S-Bus, including triple-axis gyros without GPS!
New functions:
- Integral iGyro: triple-axis gyro system with Heading function and set-up assistant without GPS
- Independent outputs for : 2 x aileron; 2 x elevator; 2 x rudder
- Door sequencer: 6 x freely programmable outputs, with set-up assistant
- robbe/Futaba S.Bus (PowerBus): 2 outputs, 16 + 2 channels, compatible with other servo bus systems
- Servo-match function: centre, end-points and reverse for all 24 outputs

Specification:
- Operating voltage: 4.0 V - 9.0 V
- Power supply: 2 x 5S NiMH / NiCd, 2S LiPo, 2S LiFePo
- Current drain, operating: approx. 185 mA
- Idle current: approx. 30 µA
- Output voltage: 5.9 V and / or 7.4 V stabilised
- Current capacity: peak 4 x 20 A
- Dropout voltage: 0.3 V
- Servo signal resolution: 0.5 µs
- User-variable frame rate: 9 ms, 12 ms, 15 ms, 18 ms, 21 ms
- Screen: LCD 128 x 64 pixels, graphic
- Servo sockets: 24 sockets
- Channels: max. 18
- Telemetry: Spektrum, Hott, M-Link, others to follow
- Dimensions: 136 x 83 x 20 mm
- Weight incl. screen and switch: 250 g
- Temperature range: -30°C to +75°C

PowerBox Sensor (MPX-Anschluss)

No. 6705

The electronic switch backer: genuine double security!
The PowerBox Sensor is the world's first and smallest battery backer compatible with NC and LiPo batteries. It is equipped with two linear regulators, two electronic switches and genuine double security, and thousands of them have been produced and appreciated since 2004. The unit now also features dual voltage monitoring and a minimum voltage memory.

Specification:
- Output max. 5.0 Ampere (depending on heat-sink area)
- Power supply: 2 x 2-cell 7.4 Volt LiPo battery; 2 x 5-cell NiCd or NiMH battery; 2 x 2-cell LiFePo battery (A123)
- MPX battery connectors
- Two linear voltage regulators, independent of each other, generating 5.90 Volt
- Two independent electronic switches
- Two 4-stage voltage monitors for both batteries NEW
- Two minimum value memories for both batteries NEW
- SET button protects On and Off state
- LED indicators for both power circuits
- Working voltage range 4.0 to 9.0 Volt
- Temperature range -10° to +75°C
- Voltage loss approx. 0.35 Volt
- Weight only 35 grammes incl. all connecting leads

The most modern switching system in the model world - thousands already in use - genuine double security for your model, and everything integrated into the switch!

Electronic accessories

PowerBox Digi Switch (MPX-Anschluss) No. 6704

The smallest electronic switch system / linear regulator combination for modelling!
This innovative product is the world's first multi-function switching system, developed and produced by PowerBox Systems GmbH especially for use with modern, lightweight Lithium-Polymer cells. It provides a substantial increase in electronic security for the receiver power supply. This switch design incorporates a modern electronic switch, a linear high-performance IC-controlled voltage stabilisation circuit and a four-stage voltage monitor for a two-cell LiPo battery or a five-cell NC battery, all combined neatly in a robust switch housing.

Specification: • Electronic switch, actuated using a sensor button
- Linear IC-controlled voltage regulator
- LiPo battery voltage monitoring using a multi-colour LED
- Low-voltage detection
- Input voltage 8.40 Volt (2 LiPo cells)
- MPX battery connector
- Output voltage 5.50 Volt (equating to a fully charged four-cell NC battery)
- Regulator capacity approx. 3 - 5 A (depending on overall cooling)
- Weight only 15 grammes

The primary applications for the Digi-Switch are as follows:
- Small to medium-sized fixed-wing model aircraft with up to six standard-size servos
- The ideal choice for use in F3A model aircraft
- Model gliders with up to eight servos or more - depending on servo size, model size and servo usage
- Electric or glow-powered model helicopters with up to 1.20 m rotor diameter and max. six servos
- RC model cars
- RC model boats
- Petrol engine ignition systems designed for the voltage of a four-cell NC battery (DA)

PowerBox Spark Switch 5,9V No. 6702

PowerBox Systems ignition switch - 5.9 V!
The SparkSwitch is a reliable, high-performance ignition switch. The whole construction of the SparkSwitch was deliberately kept simple, but without omitting important functions. The ignition switch requires no adjustments, and is immediately ready for use. The only requirement is to assign the switch at the transmitter.

Specification:
- Input voltage 4.0 - 9.0 V
- Regulated output voltage: 5.9 V
- Max. output current 2 A, peak 4.5 A
- External power-on monitor LED
- Power currents isolated by opto-coupler
- Two different switching modes
- Current drain from receiver 2 mA
- Current drain from switch when on: 19 mA
- Current drain from switch when off: 0.2 µA
- Fail-safe mode
- Weight including patch-lead: 22 g

Electronic accessories

PowerBox Spark Switch 7,4V

No. 6703

PowerBox Systems ignition switch - 7.4 V!
The SparkSwitch is a reliable, high-performance ignition switch. The whole construction of the SparkSwitch was deliberately kept simple, but without omitting important functions. The ignition switch requires no adjustments, and is immediately ready for use. The only requirement is to assign the switch at the transmitter.

Specification:
- Input voltage 4.0 - 9.0 V
- Regulated output voltage 7.4 V
- Max. output current 2 A, peak 4.5 A
- External power-on monitor LED
- Power circuits isolated by opto-coupler
- Two different switching modes
- Current drain from receiver 2 mA
- Current drain from switch when on 19 mA
- Current drain from switch when off 0.2 µA
- Fail-safe modus
- Weight including patch-lead: 22g

PowerBox Smokepumpe

No. 6711

The PowerBox smoke pump!
- The most successful smoke pump world-wide over the last six years
- Motor and electronics protected in a robust, sealed housing
- Pump and electronics developed in-house by PowerBox Systems
- Pump and electronics manufactured in-house
- Extremely durable, sealed metal-geared pump
- Variable flow rate, adjustable in the range 0% to 100%
- Can be adjusted to suit any engine and exhaust system
- The high flow rate of up to 750 ml is adequate for model jets
- No additional accessories or valve required
- Available in two electronic versions:
  For direct connection to all PowerBox power supply units, or for use with an external battery if a different power supply system is in use

Materials employed:
Pump housing and cover: Al Zn Mg Cu. 1,5, Used in aircraft construction for heavily stressed parts, Brinell hardness rating 140. Gears made of Ms 58 / CuZn 40 Pb 2, floating bearings inside the pump; not pressed, Brinell hardness rating 95. Du Pont Viton gaskets, max. +200°C, resistant to all hydrocarbons

Accessories supplied:
- 2 patch-leads for power supply and control unit
- T-piece distributor
- Heat-resistant, fabric-sheathed rubber hose for silencer connection

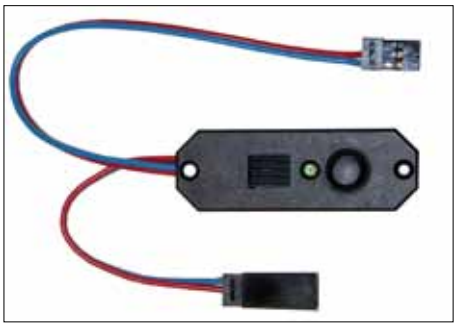
Electronic accessories

PowerBox Sensor (UNI-Anschluss) No. 6712

The electronic switch backer: genuine double security!
The PowerBox Sensor is the world's first and smallest battery backer compatible with NC and LiPo batteries. It is equipped with two linear regulators, two electronic switches and genuine double security, and thousands of them have been produced and appreciated since 2004. The unit now also features dual voltage monitoring and a minimum voltage memory.

Specification:
- Output max. 5.0 Ampere (depending on heat-sink area)
- Power supply: 2 x 2-cell 7.4 Volt LiPo battery; 2 x 5-cell NiCd or NiMH battery; 2 x 2-cell LiFePo battery (A123)
- UNI battery connectors
- Two linear voltage regulators, independent of each other, generating 5.90 Volt
- Two independent electronic switches
- Two 4-stage voltage monitors for both batteries NEW
- Two minimum value memories for both batteries NEW
- SET button protects On and Off state
- LED indicators for both power circuits
- Working voltage range 4.0 to 9.0 Volt
- Temperature range -10° to +75°C
- Voltage loss approx. 0.35 Volt
- Weight only 35 grammes incl. all connecting leads

The most modern switching system in the model world - thousands already in use - genuine double security for your model, and everything integrated into the switch!



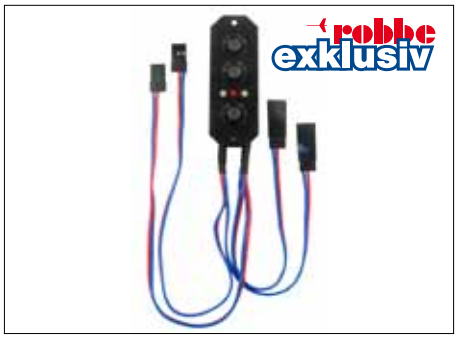
PowerBox Digi Switch (UNI-Anschluss) No. 6713

The smallest electronic switch system / linear regulator combination for modelling!
This innovative product is the world's first multi-function switching system, developed and produced by PowerBox Systems GmbH especially for use with modern, lightweight Lithium-Polymer cells. It provides a substantial increase in electronic security for the receiver power supply. This switch design incorporates a modern electronic switch, a linear high-performance IC-controlled voltage stabilisation circuit and a four-stage voltage monitor for a two-cell LiPo battery or a five-cell NC battery, all combined neatly in a robust switch housing.

Specification:
- Electronic switch, actuated using a sensor button
- Linear IC-controlled voltage regulator
- LiPo battery voltage monitoring using a multi-colour LED
- Low-voltage detection
- Input voltage 8.40 Volt (2 LiPo cells)
- UNI battery connector
- Output voltage 5.50 Volt (equating to a fully charged four-cell NC battery)
- Regulator capacity approx. 3 - 5 A (depending on overall cooling)
- Weight only 15 grammes

The primary applications for the Digi-Switch are as follows:
- Small to medium-sized fixed-wing model aircraft with up to six standard-size servos
- The ideal choice for use in F3A model aircraft
- Model gliders with up to eight servos or more - depending on servo size, model size and servo usage
- Electric or glow-powered model helicopters with up to 1.20 m rotor diameter and max. six servos
- RC model cars
- RC model boats
- Petrol engine ignition systems designed for the voltage of a four-cell NC battery (DA)

Electronic accessories



PowerBox Sensor 7.4 V (UNI connector) No. 6714

EXCLUSIVE to robbe Modellsport: The electronic HV (7.4 V) switch backer: genuine double security!
The PowerBox Sensor is the world's first and smallest battery backer compatible with NC and LiPo batteries. It is equipped with two linear regulators, two electronic switches and genuine double security, and thousands of them have been produced and appreciated since 2004. The unit now also features dual voltage monitoring and a minimum voltage memory.

Specification:
- Output max. 8.0 Ampere (depending on heat-sink area)
- Power supply: 2 x two-cell 7.4 Volt LiPo battery; 2 x 5-cell NiCd or NiMH battery; 2 x 2-cell LiFePo battery (A123)
- UNI battery connectors
- Two linear voltage regulators, independent of each other, generating 7.4 Volt
- Two independent electronic switches
- Two four-stage voltage monitors for both batteries NEW
- Two minimum value memories for both batteries NEW
- SET button protects On and Off state
- LED indicators for both power circuits
- Working voltage range 4.0 to 9.0 Volt
- Temperature range -10° to +75°C
- Voltage loss approx. 0.35 Volt
- Weight only 35 grammes incl. all connecting leads

The most modern switching system in the model world - thousands already in use - genuine double security for your model, and everything integrated into the switch!

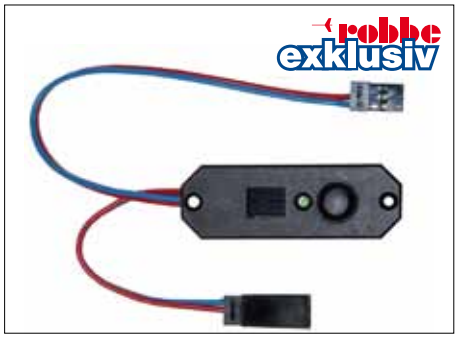
PowerBox Sensor 7.4 V (MPX connector) No. 6715

EXCLUSIVE to robbe Modellsport: The electronic HV (7.4 V) switch backer: genuine double security!
The PowerBox Sensor is the world's first and smallest battery backer compatible with NC and LiPo batteries. It is equipped with two linear regulators, two electronic switches and genuine double security, and thousands of them have been produced and appreciated since 2004. The unit now also features dual voltage monitoring and a minimum voltage memory.

Specification:
- Output max. 8.0 Ampere (depending on heat-sink area)
- Power supply: 2 x two-cell 7.4 Volt LiPo battery; 2 x 5-cell NiCd or NiMH battery; 2 x 2-cell LiFePo battery (A123)
- UNI battery connectors
- Two linear voltage regulators, independent of each other, generating 7.4 Volt
- Two independent electronic switches
- Two four-stage voltage monitors for both batteries NEW
- Two minimum value memories for both batteries NEW
- SET button protects On and Off state
- LED indicators for both power circuits
- Working voltage range 4.0 to 9.0 Volt
- Temperature range -10° to +75°C
- Voltage loss approx. 0.35 Volt
- Weight only 35 grammes incl. all connecting leads

The most modern switching system in the model world - thousands already in use - genuine double security for your model, and everything integrated into the switch!

Electronic accessories



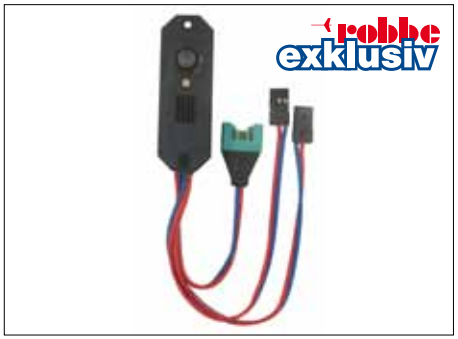
PowerBox Digi Switch 7.4 V (UNI connector)

No. 6716

EXCLUSIVE to robbe Modellsport: The smallest electronic switch system combined with linear voltage regulator for modelling - HV (7.4 V)!
This innovative product is the world's first multi-function switching system, developed and produced by PowerBox Systems GmbH especially for use with modern, lightweight Lithium-Polymer cells. It provides a substantial increase in electronic security for the receiver power supply. This switch design incorporates a modern electronic switch, a linear high-performance IC-controlled voltage stabilisation circuit and a four-stage voltage monitor for a two-cell LiPo battery or a five-cell NC battery, all combined neatly in a robust switch housing.

Specification:
- Electronic switch, actuated using a sensor button
- Linear IC-controlled voltage regulator
- LiPo battery voltage monitoring using a multi-colour LED
- Low-voltage detection
- Input voltage 8.40 Volt (two LiPo cells)
- UNI battery connector
- Regulated output voltage, 7.40 Volt
- Regulator capacity approx. 5 - 8 A (depending on overall cooling)
- Weight only 15 grammes

The primary applications for the Digi-Switch are as follows:
- Small to medium-sized fixed-wing model aircraft with up to six standard-size servos
- The ideal choice for use in F3A model aircraft
- Model gliders with up to eight servos or more - depending on servo size, model size and servo usage
- Electric or glow-powered model helicopters with up to 1.20 m rotor diameter and max. six servos
- RC model cars
- RC model boats
- Petrol engine ignition systems designed for the voltage of a four-cell NC battery (DA)



PowerBox Digi Switch 7.4 V (MPX connector)

No. 6717

EXCLUSIVE to robbe Modellsport: The smallest electronic switch system combined with linear voltage regulator for modelling - HV (7.4 V)!
This innovative product is the world's first multi-function switching system, developed and produced by PowerBox Systems GmbH especially for use with modern, lightweight Lithium-Polymer cells. It provides a substantial increase in electronic security for the receiver power supply. This switch design incorporates a modern electronic switch, a linear high-performance IC-controlled voltage stabilisation circuit and a four-stage voltage monitor for a two-cell LiPo battery or a five-cell NC battery, all combined neatly in a robust switch housing.

Specification:
- Electronic switch, actuated using a sensor button
- Linear IC-controlled voltage regulator
- LiPo battery voltage monitoring using a multi-colour LED
- Low-voltage detection
- Input voltage 8.40 Volt (two LiPo cells)
- UNI battery connector
- Regulated output voltage 7.40 Volt
- Regulator capacity approx. 5 - 8 A (depending on overall cooling)
- Weight only 15 grammes

The primary applications for the Digi-Switch are as follows:
- Small to medium-sized fixed-wing model aircraft with up to six standard-size servos
- The ideal choice for use in F3A model aircraft
- Model gliders with up to eight servos or more - depending on servo size, model size and servo usage
- Electric or glow-powered model helicopters with up to 1.20 m rotor diameter and max. six servos
- RC model cars
- RC model boats
- Petrol engine ignition systems designed for the voltage of a four-cell NC battery (DA)

Receiver batteries

LiPo-Akku ROXXY® Evo 2-2600 20C **No. 6975**

Set contents
BID chip, EHR balancer connector

Specification:

Charge current	max. 6 A
Load current	6 A
Load current, peak:	12 A
Dimensions L x W x H:	113 x 34 x 18 mm
Weight approx.	160 g
Capacity	2600 mAh
Voltage	7.4 Volt
Connector system	Futaba

LiPo-Akku ROXXY® Evo 2-3200 20C **No. 6976**

Set contents
BID chip, EHR balancer connector

Specification:

Charge current	max. 6 A
Load current	6 A
Load current, peak:	12 A
Dimensions L x W x H:	136 x 43 x 14 mm
Weight approx.	191 g
Capacity	3200 mAh
Voltage	7.4 Volt
Connector system	Futaba

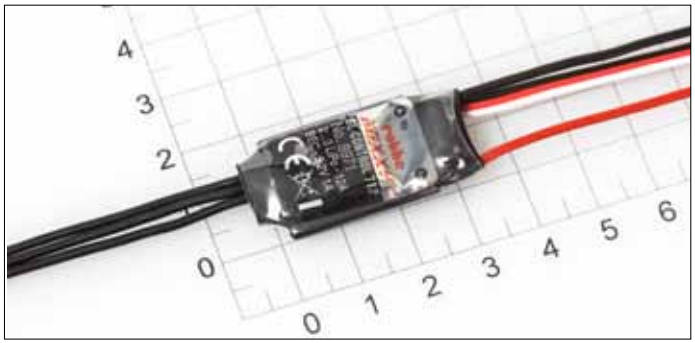
LiPo-Akku ROXXY® Evo 2-4000 20C **No. 6977**

Set contents
BID chip, EHR balancer connector

Specification:

Charge current	max. 6 A
Load current	6 A
Load current, peak:	12 A
Dimensions L x W x H:	143 x 43 x 16 mm
Weight approx.	233 g
Capacity	4000 mAh
Voltage	7.4 Volt
Connector system	Futaba

Switches and controllers

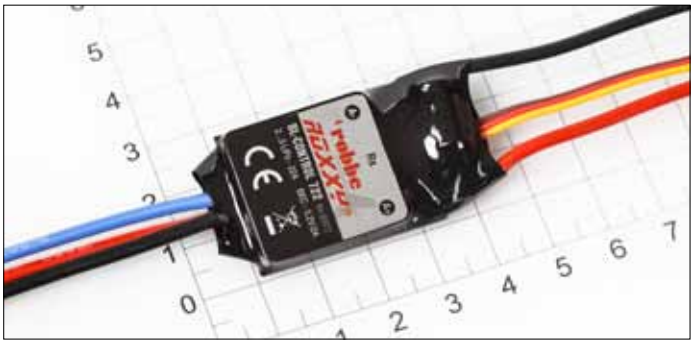


ROXXY® BL Control 712 BEC No. 8971

Compact, programmable ROXXY®BL controller for 12 A load current, weighs just 9 g.
New version of the proven ROXXY® BL-Control for brushless outrunner motors, designed for 6...10 NC / NiMH or 2..3 LiPo cells. Now with extra capacity of 12 A.
The clock frequency is 10,000 Hz, guaranteeing ultra-fine motor speed control, which offers particular advantages in „torque-roll“ manoeuvres. The brake is programmable, and can be switched on and off. The low-voltage cut-off is user-variable; available settings are low - medium - high. The motor start-up behaviour can be set to normal, medium or soft. The motor timing can also be set to any of three levels.
In common with all robbe speed controllers, this unit also features the usual protective and filter functions, such as POR start-up protection, RX-filter and thermal overload protection.

Specification:

No. of cells	NiCad / NiMH 6-10 or LiPo 2-3
Load current	12 A
Peak current	14 A
Dimensions	35 x 18 x 9 mm
Weight approx.	9 g
BEC	5,2 V max. 1 A
Pulse frequency	10 kHz
Protective functions	aps, Rx-Filter, PCO, POR, hec, TP



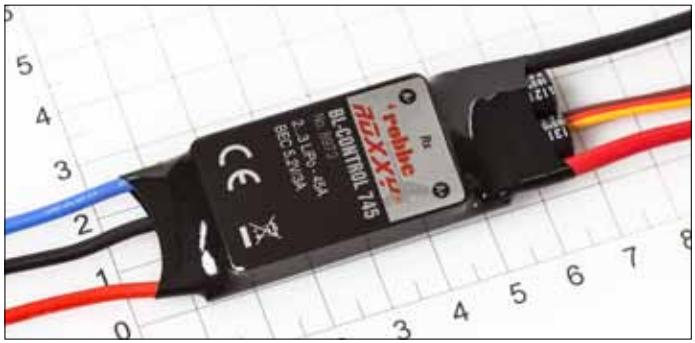
ROXXY® BL Control 722 BEC No. 8972

Compact, programmable ROXXY®BL controller for 22 A load current, weighs just 28 g.
New version of the proven ROXXY® BL-Control for brushless outrunner motors, designed for 6...10 NC / NiMH or 2..3 LiPo cells. Now with the higher capacity of 22 A. The clock frequency is 10,000 Hz, guaranteeing ultra-fine motor speed control, which offers particular advantages in „torque-roll“ manoeuvres.
The brake is programmable, and can be switched on and off. The low-voltage cut-off is user-variable; available settings are low - medium - high. The motor start-up behaviour can be set to normal, medium or soft. The motor timing can also be set to any of three levels. In common with all robbe speed controllers, this unit also features the usual protective and filter functions, such as POR start-up protection, RX-filter and thermal overload protection.

Specification:

No. of cells	NiCad / NiMH 6-10 or LiPo 2-3
Load current	22 A
Peak current	25 A
Dimensions	44 x 25.5 x 9 mm
Weight approx.	28 g
BEC	5,2 V max. 2 A
Pulse frequency	10 kHz
Protective functions	aps, Rx-Filter, PCO, POR, hec, TP

Switches and controllers



ROXXY® BL-Control 745 BEC No. 8973

Compact, programmable ROXXY®BL controller for 45 A load current.
New version of the proven ROXXY® BL-Control for brushless outrunner motors, designed for 6...10 NC / NiMH or 2..3 LiPo cells. Now with extra capacity of 45 A. The clock frequency is 10,000 Hz, guaranteeing ultra-fine motor speed control, which offers particular advantages in „torque-roll“ manoeuvres.
The brake is programmable, and can be switched on and off. The low-voltage cut-off is user-variable; available settings are low - medium - high. The motor start-up behaviour can be set to normal, medium or soft. The motor timing can also be set to any of three levels
. In common with all robbe speed controllers, this unit also features the usual protective and filter functions, such as POR start-up protection, RX-filter and thermal overload protection.

Specification:

No. of cells	NiCad / NiMH 6-10 or LiPo 2-3
Load current	45 A
Peak current	50 A
Dimensions	67 x 25.5 x 10 mm
Weight approx.	45 g
BEC	5,2 V max. 3 A
Pulse frequency	10 kHz
Protective functions	aps, Rx-Filter, PCO, POR, hec, TP

ROXXY® Smart Control – the intelligent speed controller

The new ROXXY® Smart Control BL speed controller series offers an integral telemetry function via the digital S.BUS2 interface. In this way the ROXXY® Smart Control keeps you constantly informed about the current state of your power system: current, battery capacity, rotational speed, voltage and temperature are monitored, and the data are passed to the pilot.
The ROXXY® Smart Control range of speed controllers is based on the ROXXY® 900 series, thousands of which are already in use. These units provide the same high quality and performance for high-quality power systems.
The integral telemetry function replaces five separate sensors - for current, capacity, rpm, voltage and temperature - without additional costs and wiring. A standard feature of the new ROXXY® Smart Control speed controllers is the digital Futaba S.BUS2 interface, for easy connection to Futaba telemetry systems. All control signals, and also the telemetry data generated by all the integral sensors, are passed to the receiver via a single connecting lead, i.e. the S.BUS System.
Simply install, connect and program the speed controller in the usual way, register it as a sensor at the transmitter, and the telemetry data appear on the transmitter's screen - that's all there is to it.
Naturally Futaba transmitters have a voice, and are capable of announcing the telemetry data via speech output. It is also possible to set alarm values at the transmitter, with output as an audible warning - speech or beeper - or via a vibration alarm.
With all FASSTest® transmitters the telemetry data can be recorded on an SD memory card, and are therefore available for a detailed post-flight analysis. Various PC programs are available for analysing the data.

Highlights:

- Optional programming card for clear, simple adjustment of the functions.
- Speed controllers can be set up for inrunner or outrunner motors, with LED indicator.
- Timing mode for matching to the motor pole count.
- Switchable brake with user-variable braking power.
- High clock frequency for fine motor control, e.g. for „torque rolls"
- Integral temperature guard protects the unit from thermal overload.
- As with all robbe speed controllers, the Smart units are equipped with the usual protective and filter functions, including POR power-on guard and RX-filter.
- Matched to the ROXXY® series of brushless motors, but can be used with other BL motors since there are virtually no restrictions on the motor's pole count.
- User-variable soft-start
- Integral sensors: current, battery capacity, motor speed, voltage and temperature
- Digital S.BUS interface
- Naturally the controllers can also be connected to normal PWM receiver outputs, as the S.BUS interface understands both signals. In this case, however, without the telemetry function.

ROXXY® Smart Control 940-6 SV

No. 8573

The ROXXY® Smart Control 940-6SV is a speed controller for model aircraft with 2…6S flight batteries and 40 A continuous load current. The unit includes a very high-performance BEC circuit which is designed for a continuous current of 5 A. The BEC voltage can be set to any of four values - 5, 6, 6.4 and 7.4 Volt - and is therefore compatible with all LV and HV servo types.

Specification:

Cell count:	6…18 Nixx, 2…6 LiPo
Load current:	
Continuous:	40 A
Peak:	45 A
BEC:	5…7.4 V, 5 A
Protective functions:	PCO, POR, TP, Rx-filter
Dimensions:	45 x 35 x 12 mm
Weight:	32 g

Switches and controllers

ROXXY® Smart Control 960-6 SV

No. 8574

The ROXXY® Smart Control 960-6SV is a speed controller for model aircraft with 2…6S flight batteries and 60 A continuous load current. The unit includes a very high-performance BEC circuit which is designed for a continuous current of 5 A. The BEC voltage can be set to any of four values - 5, 6, 6.4 and 7.4 Volt - and is therefore compatible with all LV and HV servo types.

Specification:

Cell count:	6…18 Nixx, 2…6 LiPo
Load current:	
Continuous:	60 A
Peak:	70 A
BEC: 5…7.4 V, 5 A	
Protective functions:	
	PCO, POR, TP, Rx-filter
Dimensions:	55 x 40 x 12 mm
Weight:	42 g

ROXXY® Smart Control 9100-6 SV

No. 8575

The ROXXY® Smart Control 9100-6SV is a speed controller for model aircraft with 2…6S flight batteries and 100 A continuous load current. The unit includes a very high-performance BEC circuit which is designed for a continuous current of 5 A. The BEC voltage can be set to any of four values - 5, 6, 6.4 and 7.4 Volt - and is therefore compatible with all LV and HV servo types.

Specification:

Cell count:	6…18 Nixx, 2…6 LiPo
Load current:	
Continuous:	100 A
Peak:	115 A
BEC:	5…7.4 V, 5 A
Protective functions:	
	PCO, POR, TP, Rx-filter
Dimensions:	60 x 35 x 12 mm
Weight:	60 g

ROXXY® Smart Program Card Deutsch

No. 85731000

ROXXY® Smart Program Card Englisch

No. 85732000

ROXXY® Smart Control programming card. Accessories required for adjusting the parameters of the ROXXY®- Smart speed controller series.
Legend, German resp. Englisch

Programming card functions:
- Braking power: 0 - 25 - 50 - 75 - 100%
- Battery type: LiPo - Nixx - LiFe
- Cut-off: soft - hard - off
- Cut-off voltage: low - medium - high
- Start mode: normal – medium – soft
- Timing mode: low - medium - high
- Acceleration: off, soft - medium - hard
- Governor mode: off, soft - medium - hard

Typical method of connecting the programming card to the ROXXY® Smart Control speed controller for adjusting the controller's parameters.

Power supplies

Mains PSU 300W 20A

No. 8143

Compact, high-performance 300 Watt mains PSU, with user-variable output voltage and digital display of voltage and current.
The input voltage range is 100…240 V, and the mains lead plugs into the unit, making it extremely versatile.
The output voltage can be adjusted within the range 8….15 Volt DC, and the maximum current is 20 A. The unit's total continuous power is 300 Watt. Two sockets are available for supplying the electrical energy to consumer units such as battery chargers.
The mains PSU also features two USB outputs with a total capacity of 5 V / 1 A - ideal for charging devices such as smart-phones, digital cameras, etc.

Specification:

Input voltage:	100…240 V AC 50/60 Hz
Output voltage	8…15 V DC
Load current:	20 A DC
Output power:	300 W
Dimensions:	178 x 139 x 60 mm
Weight:	1.2 kg

Over-temperature guard
Current overload protection
Short-circuit protection

Side view: temperature-controlled cooling fan. Plug-in mains lead and integral mains switch.

Mains PSU 540W / 30A

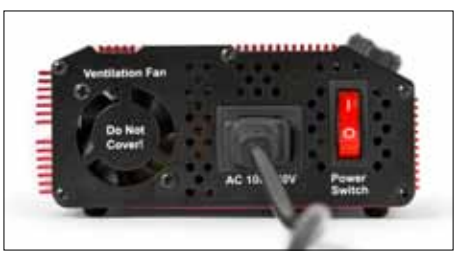
No. 8142

Compact, powerful 540 Watt mains PSU, with user-variable output voltage and digital display of voltage and current.
The input voltage range is 100…240 V, and the mains lead plugs into the unit, making it extremely versatile.
The output voltage can be adjusted within the range 12….18 Volt DC, and the maximum current is 30 A. The unit's total continuous power is 540 Watt. Two sockets are available for supplying the electrical energy to consumer units such as battery chargers.
The mains PSU also features two USB outputs with a total capacity of 5 V / 1 A - ideal for charging devices such as smart-phones, digital cameras, etc.

Specification:

Input voltage:	100…240 V AC 50/60 Hz
Output voltage	12…18 V DC
Load current:	30 A DC
Output power:	540 W
Dimensions:	218 x 139 x 60 mm
Weight:	1.6 kg

Over-temperature guard
Current overload protection
Short-circuit protection



Side view: temperature-controlled cooling fan. Plug-in mains lead and integral mains switch.

Power supplies

Mains PSU 1200 Watt 50A **No. 8136**

Powerful 1200 Watt mains PSU, with user-variable output voltage and digital display of voltage and current.
The input voltage range is 100…240 V, and the mains lead plugs into the unit, making it extremely versatile.
The output voltage can be adjusted within the range 15….30 Volt DC, and the maximum current is 50 A. The unit's total continuous power is 1200 Watt.
The electrical energy is transferred to consumer units such as battery chargers via four sockets, three of which are switchable. The mains PSU also features two USB outputs with a total capacity of 5 V / 2.1 A - ideal for charging devices such as tablets, smartphones, digital cameras, etc.

Specification:

Input voltage:	100…240 V AC 50/60 Hz
Output voltage	15…30 V DC
Load current:	50 A DC
Output power:	1200 W
Dimensions:	305 x 170 x 85 mm
Weight:	3 kg

Over-temperature guard
Current overload protection
Short-circuit protection

Side view: temperature-controlled cooling fan, plug-in mains lead and integral mains switch.

View of the mains PSU outputs. The main 50 A socket, plus three further 10 A sub-sockets, each separately switchable. Total output current 50 A.

The mains PSU also features two USB sockets for charging USB devices at 5 V / 1 A, also suitable for the iPhone.

Digital current and voltage display. With infinitely variable output voltage in the range 14.7...30 V, therefore also suitable as power source for the vast majority of 12 V battery chargers. The over-voltage protection function of most 12 V battery chargers is triggered above 15 V.

POWER PEAK D7 400 W
robbe POWER PEAK D7 400 W
BATT TYPE
DEC.
INC.
START
Equalizer
USB
5V/1A
1
2

POWER PEAK® D7 EQ-BID 12V / 230V No. 8129

High-performance 400 W charging / discharging station for the demanding modeller.

Two outputs, each with 200 Watt power and up to 20 A charge current, in a single case. The Power charger which can recharge your LiPo batteries on the move and at home - and very quickly.
Both charge circuits work entirely separately of each other, and can also be adjusted individually. The charge data for all outputs are displayed in clear form on separate backlit graphic screens.
The menu language can be selected from German, English and French. The high-performance integral equalizer measures the cells whilst drawing zero current, and balances them at a powerful 300 mA, which is sufficient even for batteries with a capacity of 5 Ah and more.
The device features mini-USB sockets which the user can employ to update the software at any time. In future the charge data will also be present at these sockets, so that the information can be read out and processed using the new Logview software.
A 5 V / 1 A USB charge socket for smartphones, digital cameras and sat-nav devices, etc., is also present.

Simple, reliable operation and automatic saving of the essential battery data using the robbe BID system (Battery IDentification system).

The special advantages of the BID system:

- Simply plug the BID key into the charger, and start the charge process.
- No need for tiresome charge parameter adjustment in the menu system
- Maximum protection from incorrect operation
- Storage of essential battery data on the BID chip or key
- Of course, the POWER PEAK® Twin charger can also charge batteries not fitted with the BID system
- Two BID chips are included with the charger.

Set contents

1 POWER PEAK® D7 12/230V
1 Universal charge lead
2 Croc clips
2 BID-Chips
1 Manual

Specification:

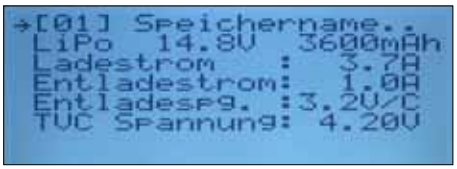
Input voltage	10,5...18V-DC oder 230V-AC
No. of cells	2 x 1...18 Nx, 1...7 LiIo/LiPo/LiFe, 1...12 PB/Blei
Charge current	2 x 0,1....20 A
Discharge current	2 x 0,1....10 A
Dimensions	270mm x 200mm x 85mm
Weight approx.	2600 g

Recommended accessories

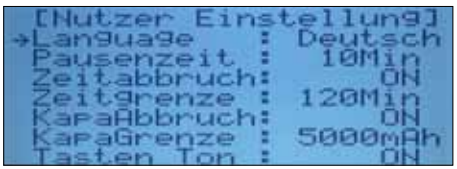
BID key	1x 8888
BID chip	1x 8472
Voltage sensor lead, 3-pin 0.2 sq mm	1x 4025
Voltage sensor lead, 4-pin 0.2 sq mm	1x 4026
Voltage sensor lead, 5-pin 0.2 sq mm	1x 4027
Voltage sensor lead, 6-pin 0.2 sq mm	1x 4028
Voltage sensor lead, 4-pin 0.2 sq mm	1x 4021
Voltage senso rlead, 8-pin 0.2 sq mm	1x 4797
T12FG / FX-30 charge lead, 1.7 mm	1x 8260
T4YF - T4PK transmitter charge lead, D 1.3 mm	1x F1535
CT2 gold charge lead, 2 mm	1x 8254
GO3 gold charge lead, 3 mm	1x 4114
GO3.5 gold charge lead, 3.5 mm	1x 8256
CT4 gold charge lead, 4 mm	1x 4059
Charge lead, JST / TAM	1x 8192
Charge lead, AMP	1x 8253
Charge lead, T-connector	1x 8881
T-14 MZ transmitter charge lead	1x 8448
High-current charge lead, 30 A	1x 8893
Equalizer adapter, robbe-PQ	1x 8213
Equalizer adapter, robbe-TP/FP	1x 8215

Front charger sockets

Typical method of connecting a LiPo battery.



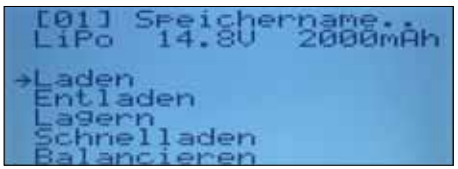
Charge parameter set-up display. Battery to be charged: 4S 3600 mAh, = 14,8 Volt, 3,7 A



Safety cut-off timer settings for switching off after 120 minutes.

Temperature-controlled cooling fan.

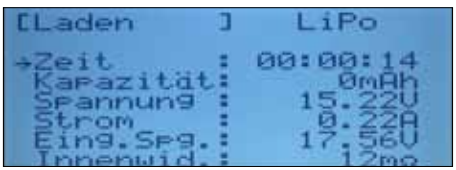
Plug-in 230 V mains lead with On / Off switch attached to integral 400 W AC mains PSU.



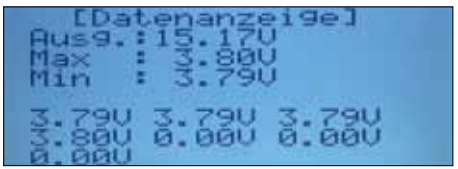
Select menu for the Charge / Discharge process.

Mini-USB socket for updating battery chargers by the user.

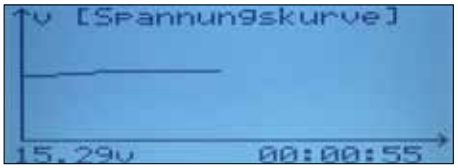
Human Interface Device (HID) for reading out, displaying, comparing, saving and printing charge data using the new Logview software.



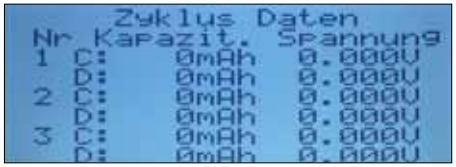
Working displaying showing the charge process



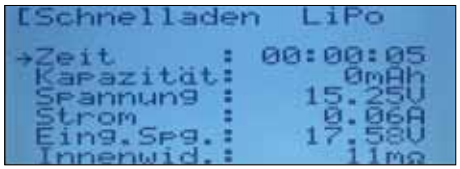
Data display: total and individual cell voltage



Data display: charge voltage curve



Data display: list of charged-in and discharged capacities in Cycle mode



Fast-charge mode: fast-charge mode without balancer function, for ultra-rapid recharging of about 90% of full capacity.

Pure battery balancing program

Functions:
Input:
10.5…18 V DC (user-variable low voltage alarm, 11…12 V)
or 100…240 V AC (plug-in lead with On / Off switch)
- 2 x 0.1…20 A charge current (max. 200 W per output - 12 V or 230 V)
- 2 x 0.1…10 A discharge current (max. 40 W per output)
- USB charge socket, 5 V / 1 A for smartphones and digital cameras
- Internal resistance measurement
- Internal device temperature display
- 2 x 20 internal battery data memories
- Charge / discharge (cycle) – mode 1 - 10 x with capacity display per cycle
- Mini-USB socket for firmware upgrades and future data output

- Menu system can be set to German, English, French or Italian.
- Over-temperature guard
- Current overload protection
- Short-circuit protection

NC / NiMH batteries
- 2 x 1…18 NC / NiMH cells
- Charge process: automatic, normal, linear and reflex methods
- User-variable trickle charge current (50…300 mA, off)
- Variable peak sensitivity (3…15 mV / cell)
- Variable pre-peak suppression (1…5 min., off)

Lithium batteries, LiIo (3.6 V), LiPo (3.7 V) or LiFe (3.3 V)
- 2 x 1…7 Lithium cells - charge and discharge, cycle
- Powerful balancer with 300 mA and zero-current measurement
- Selectable charge power, up to 5C (20 A)
- User-variable maximum cell voltage
- Safety timer cut-off (20...720 min., off)
- Maximum capacity cut-off (0.1…60 Ah)
- Storage mode (60%)
- Fast-charge mode without balancing function
- Separate balancing program
- 0.1 Volt boost function for Lithium batteries. Increasing the cut-off voltage by 0.1 Volt provides approximately 10% more battery capacity.

Lead-acid batteries
- 2 x 2…24 V lead-acid batteries - charge and discharge

Rechargeable batteries

LiPo ROXXY® Evo batteries

Robbe ROXXY® EVO LiPo batteries – more power, more capacity!

The proven robbe ROXXY® high-performance LiPo batteries are now available in a new, revised EVO version.
The ROXXY® EVO range of batteries offers crucial improvements in all aspects of performance.
Although previous ROXXY® LiPo packs had an above-average voltage curve even when delivering severe load currents, the voltage curve of the new ROXXY® EVO series provides a perceptible increase in „push“.
We have also managed to increase significantly the capacity under load and the total cycle count of ROXXY® EVO batteries.
To cap it all, ROXXY® Evo packs are physically smaller and lighter in weight, despite their higher C-rating.
All ROXXY® EVO batteries feature the unique robbe BID chip technology as an integral feature, for ultra-simple handling in conjunction with robbe POWER PEAK® chargers.
(apart from the 450 - 1800 mAh battery types and No. 6990)

Overview robbe Lipo-batteries ROXXY® Evo						
			Dimensions in mm			
No.	Title	C-Rate	L	W	H	Weight (g)
Receiver batteries						
6975	LiPo-Akku ROXXY® Evo 2-2600	20C	113	34	18	160
6976	LiPo-Akku ROXXY® Evo 2-3200	20C	136	43	14	191
6977	LiPo-Akku ROXXY® Evo 2-4000	20C	143	43	16	233
Flight/drive batteries 20C						
6988	LiPo-Akku ROXXY® Evo 3-2200	20C	105	34	24	193
6988T	LiPo-Akku ROXXY® Evo 3-2200 T-Stecker	20C	105	34	24	193
6990	LiPo-Akku ROXXY® Evo 3-2600 DJI Phantom XL	20C	115	34	26	221
6990T	LiPo-Akku ROXXY® Evo 3-2600 T-Stecker	20C	115	34	26	221
6989	LiPo-Akku ROXXY® Evo 6-5000	20C	157	45	47	742

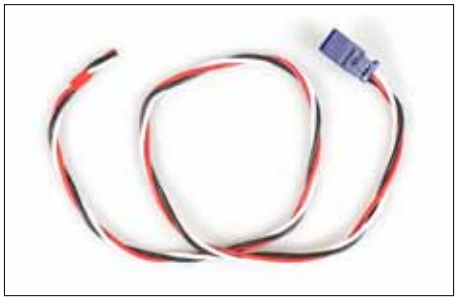
Rechargeable batteries

Overview robbe Lipo-batteries ROXXY® Evo						
			Dimensions in mm			
No.	Title	C-Rate	L	W	H	Weight (g)
Flight/drive batteries 30C						
6600	LiPo-Akku ROXXY® Evo 2-450	30C	55	30	11	32
6601	LiPo-Akku ROXXY® Evo 3-450	30C	56	31	14	46
6602	LiPo-Akku ROXXY® Evo 2-850	30C	69	30	13	49
6603	LiPo-Akku ROXXY® Evo 3-850	30C	69	30	19	76
6604	LiPo-Akku ROXXY® Evo 2-1000	30C	70	35	13	69
6605	LiPo-Akku ROXXY® Evo 3-1000	30C	70	35	19	98
6605GO35	LiPo-Akku ROXXY® Evo 3-1000	30C	70	35	19	98
6606	LiPo-Akku ROXXY® Evo 2-1250	30C	69	35	16	84
6607	LiPo-Akku ROXXY® Evo 3-1250	30C	71	35	24	124
6608	LiPo-Akku ROXXY® Evo 2-1600	30C	93	30	17	104
6609	LiPo-Akku ROXXY® Evo 3-1600	30C	94	30	24	145
6610	LiPo-Akku ROXXY® Evo 2-1800	30C	104	34	15	117
6611	LiPo-Akku ROXXY® Evo 3-1800	30C	105	34	21	163
6612	LiPo-Akku ROXXY® Evo 2-2200	30C	104	33	18	148
6613	LiPo-Akku ROXXY® Evo 3-2200	30C	106	33	26	208
6613T	LiPo-Akku ROXXY® Evo 3-2200 T-Stecker	30C	106	33	26	208
6614	LiPo-Akku ROXXY® Evo 4-2200	30C	107	33	33	264
6615	LiPo-Akku ROXXY® Evo 2-2600	30C	107	33	20	164
6616	LiPo-Akku ROXXY® Evo 3-2600	30C	107	33	29	234
6617	LiPo-Akku ROXXY® Evo 4-2600	30C	107	33	38	302
6618	LiPo-Akku ROXXY® Evo 6-2600	30C	107	33	57	438
6619	LiPo-Akku ROXXY® Evo 2-3000	30C	134	43	14	192
6620	LiPo-Akku ROXXY® Evo 3-3000	30C	136	43	20	270
6621	LiPo-Akku ROXXY® Evo 4-3000	30C	137	43	26	348
6622	LiPo-Akku ROXXY® Evo 6-3000	30C	137	43	38	497
6623	LiPo-Akku ROXXY® Evo 2-3600	30C	137	43	17	233
6624	LiPo-Akku ROXXY® Evo 3-3600	30C	137	43	24	324
6625	LiPo-Akku ROXXY® Evo 4-3600	30C	137	43	31	417
6626	LiPo-Akku ROXXY® Evo 6-3600	30C	137	43	46	603
6627	LiPo-Akku ROXXY® Evo 2-4000	30C	147	45	17	258
6628	LiPo-Akku ROXXY® Evo 3-4000	30C	147	45	24	359

Rechargeable batteries

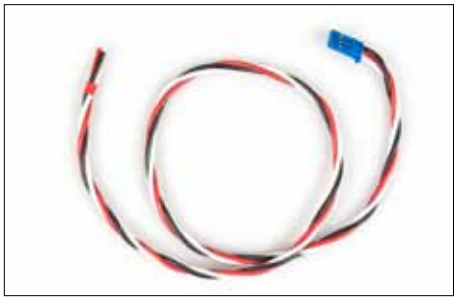
Overview robbe Lipo-batteries ROXXY® Evo						
			Dimensions in mm			
No.	Title	C-Rate	L	W	H	Weight (g)
6629	LiPo-Akku ROXXY® Evo 4-4000	30C	147	45	31	463
6630	LiPo-Akku ROXXY® Evo 5-4000	30C	147	45	38	562
6631	LiPo-Akku ROXXY® Evo 6-4000	30C	147	45	45	662
6632	LiPo-Akku ROXXY® Evo 3-4400	30C	144	45	26	392
6633	LiPo-Akku ROXXY® Evo 4-4400	30C	145	45	33	500
6634	LiPo-Akku ROXXY® Evo 5-4400	30C	145	45	41	617
6635	LiPo-Akku ROXXY® Evo 6-4400	30C	145	45	48	717
6636	LiPo-Akku ROXXY® Evo 2-5000	30C	160	45	18	311
6637	LiPo-Akku ROXXY® Evo 3-5000	30C	160	45	27	437
6638	LiPo-Akku ROXXY® Evo 4-5000	30C	160	45	34	563
6639	LiPo-Akku ROXXY® Evo 5-5000	30C	160	45	42	688
6640	LiPo-Akku ROXXY® Evo 6-5000	30C	160	45	50	820
6641	LiPo-Akku ROXXY® Evo 3-5300	30C	160	45	27	457
6642	LiPo-Akku ROXXY® Evo 4-5300	30C	160	45	36	593
6643	LiPo-Akku ROXXY® Evo 5-5300	30C	160	45	45	729
6644	LiPo-Akku ROXXY® Evo 6-5300	30C	160	45	53	870
6645	LiPo-Akku ROXXY® Evo 2-5800	30C	160	45	20	349
6646	LiPo-Akku ROXXY® Evo 3-5800	30C	160	45	30	490
6647	LiPo-Akku ROXXY® Evo 4-5800	30C	160	45	39	639
6648	LiPo-Akku ROXXY® Evo 5-5800	30C	160	45	47	776
6649	LiPo-Akku ROXXY® Evo 6-5800	30C	160	45	52	923
Flight/drive batteries 40 C						
6991	LiPo-Akku ROXXY® Evo 3-2200	40C	104	34	26	205
6992	LiPo-Akku ROXXY® Evo 6-5000	40C	160	45	51	827
In-Line Packs 30 C						
6993	LiPo-Akku ROXXY® Evo 10-4500	30C	290	53	43	1281
6994	LiPo-Akku ROXXY® Evo 12-4500	30C	290	53	50	1529
6995	LiPo-Akku ROXXY® Evo 10-5000	30C	315	52	43	1406
6996	LiPo-Akku ROXXY® Evo 12-5000	30C	320	53	51	1679
6997	LiPo-Akku ROXXY® Evo 10-5800	30C	320	52	47	1573
6998	LiPo-Akku ROXXY® Evo 12-5800	30C	320	53	58	1892

Electronic accessories



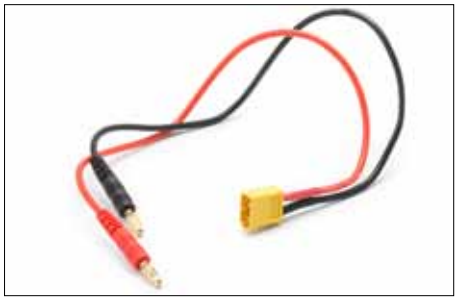
6 A servo connector with 3 x 0.5 mm² 50 cm **No. 8905**

High-current servo plug with 0.5 mm² silicone cable about 50 cm long, for making up servo / S.BUS connections. Maximum current capacity 6 A continuous, 12 A peak.



6 A servo socket, 3 x 0.5 mm² 50 cm **No. 8906**

High-current servo socket with 0.5 mm² silicone cable about 50 cm long, for making up servo / S.BUS connections. Maximum current capacity 6 A continuous, 12 A peak.



XT60 charge lead, 30 cm long, 1mm² **No. 85673000**

30 cm long, 1 mm².Contact diameter: 3.5 mm

Gold-contact connectors XT60. Contents 1 pair **No. 8567**
Gold-contact connectors XT60 (10 connectors) **No. 85671000**
Gold-contact connectors XT60. (10 sockets) **No. 85672000**

Polarised two-pin high-current connector.
Continuous load: approx. 40 A
Peak: approx. 60 A
Temperature-resistant up to: approx. 160 °C
For cable cross-sections up to 4 mm², wire gauge 11
Dimensions of the complete connection: 33.5 x 15.8 x 8.2 mm
Contact diameter: 3.5 mm

Gold-contact connectors XT90. Contents 1 pair **No. 8568**
Gold-contact connectors XT90 (10 connectors) **No. 85681000**
Gold-contact connectors XT90. (10 sockets) **No. 85682000**

Polarised two-pin high-current connector.
Continuous load: approx. 60 A
Peak: approx. 90 A
Temperature-resistant up to: approx. 160 °C
For cable cross-sections up to 6 mm², wire gauge 9
Dimensions of the complete connection: 39.6 x 21.2 x 10 mm
Contact diameter: 4.5 mm

Gold-contact connectors XT150. Contents 1 pair **No. 8569**
Gold-contact connectors XT150 (10 connectors) **No. 85691000**
Gold-contact connectors XT150 (10 sockets) **No. 85692000**

Polarised two-pin high-current connector.
Continuous load: a pprox. 100 A
Peak: approx. 150 A
Temperature-resistant up to: approx. 160 °C
For cable cross-sections up to 8 mm², wire gauge 8
Dimensions of complete connection: 40.3 x 21.4 x 10 mm
Contact diameter: 6 mm

Electronic accessories

Special lightweight servo cable for modelling.

The flexible cable is insulated using a special extremely thin-walled plastic, making the material very light in weight. The surface is smooth, glossy and slippery, making the cable easy to deploy and thread through other components.
The insulation is temperature-resistant to 100 °C, and is self-extinguishing. Ideal for servo wiring arrangements in small to medium-sized models where weight-saving is important - whether with or without an S.BUS interface.

Special servo cable, 0.14 / 0.5 mm² No. 8986

The two high-current conductors have a cross-sectional area of 0.5 mm²; the signal conductor is smaller at 0.14 mm² in order to save weight. As a result the cable weighs only 12.7 g / metre. The maximum current capacity is 7.5 A continuous and 12 A peak.

Dimensions:

Positive and negative conductors:	0.5 mm²
Signal conductor:	0.14 mm²
Colours:	black, white, red
Length:	5m
Weight:	12,7 g/m
Diameter	2,2 mm

Silicone cable – comparison:

Weight	19 g/m
Diameter:	3,2 mm

Special servo cable, 0.25 / 1 mm², 5 m No. 8987

The two high-current conductors have a cross-sectional area of 1 mm²; the signal conductor is smaller at 0.25 mm² in order to save weight. As a result the cable weighs only 24.7 g / metre. The maximum current capacity is 18 A continuous and 25 A peak.

Dimensions:

Positive and negative conductors:	1 mm²
Signal conductor:	0.25 mm²
Colours:	black, white, red
Length:	5 m
Weight	24,7g/m
Diameter:	3,5 mm

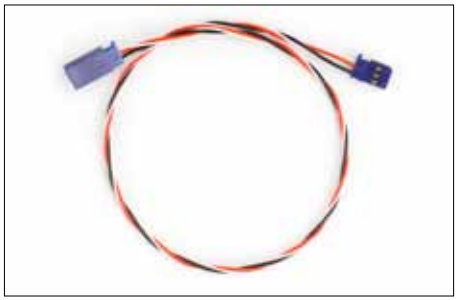
Silicone cable – comparison:

Weight	30 g/m
Diameter:	4,2 mm

Extremely thin insulation

Normal insulation

Electronic accessories



Servo extension lead, Futaba 6 A No. 89880020
Servo extensions lead, Futaba 6A No. 89880040
Servo extensions lead, Futaba 6A No. 89880100
Servo extensions lead, Futaba 6A No. 89880150

Ready-made servo extension lead with Futaba 6 A connector and special lightweight servo cable.
Specially developed for modelling applications. Current rating 6 A continuous (peak 12 A)

Dimensions:

Positive and negative conductors:	0.5 mm²
Signal conductor:	0.14 mm²
Colours:	black, white, red
Cable weight:	12.7 g/m
Load current:	
Continuous:	6 A
Peak:	12 A

Multi-plug with special servo cable No. 89960100
Multi-plug with special servo cable No. 89960150
Multi-plug with special servo cable No. 89960200

Ready-made multi-plug with special lightweight servo cable, 0.25 / 1 mm².
Ideal connectors in servo power supply systems or for wing-mounted servos in small to medium-sized model aircraft. The continuous current rating of 18 A makes these connectors the perfect choice for applications with several high-power digital servos. Can be used for conventional (star-formation) wiring systems as well as digital S.BUS systems.

Dimensions:

Positive and negative conductors:	1 mm²
Signal conductor:	0.25 mm²
Colours:	black, white, red
Weight:	24.7 g
Load current:	
Continuous:	18 A
Peak:	25 A

Multi-plug with special servo cable No. 89970100
Multi-plug with special servo cable No. 89970150
Multi-plug with special servo cable No. 89970200

Ready-made multi-socket with special lightweight servo cable.
Ideal connectors in servo power supply systems or for wing-mounted servos in small to medium-sized model aircraft. The continuous current rating of 18 A makes these connectors the perfect choice for applications with several high-power digital servos. Can be used for conventional (star-formation) wiring systems as well as digital S.BUS systems.

Dimensions**:**

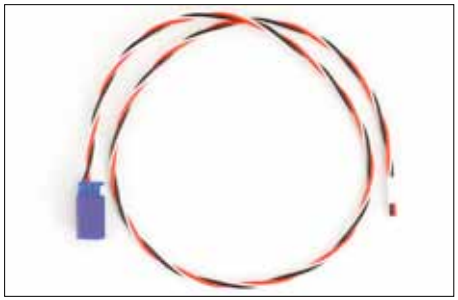
Positive and negative conductors:	1 mm²
Signal conductor:	0.25 mm²
Colours:	black, white, red
Weight:	24.7 g
Load current:	
Continuous:	18 A
Peak 2	5 A

T-plug and socket (1 pair) No. 8896

T-socket and plug for soldering to cable, with heat-shrink sleeve.

Contents 1 pair.	
Load current:	36 / 50 A
Contact width:	4.1 mm
Overall dimensions of connector:	27 x 13.4 x 7.7 mm

Electronic accessories



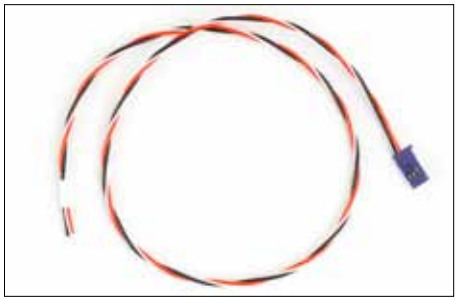
Futaba 6 A plug with 50 cm lead
No. 89980050

Futaba 6 A plug with 100 cm lead
No. 89980100

Ready-made Futaba 6 A plug with special lightweight servo cable
Specially developed for plug-in connections in servo power supply systems or for wing-mounted servos in small to medium-sized model aircraft. With a maximum continuous current capacity of 6 A (peak 12 A) this connector is adequate for the requirements of about 70% of models. Can be used for conventional (star-formation) wiring systems as well as digital S.BUS systems.

Dimensions:

Positive and negative conductors:	0.5 mm²
Signal conductor:	0.14 mm²
Colours:	black, white, red
Load current:	
Continuous:	6 A
Peak:	12 A



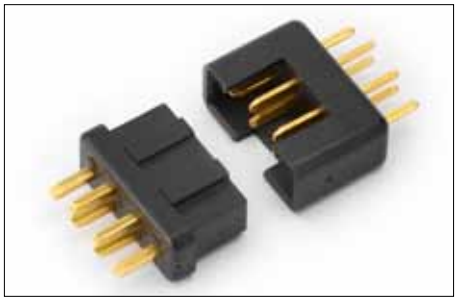
Futaba 6 A socket with 50 cm lead
No. 89990050

Futaba 6 A socket with 100 cm lead
No. 89990100

Ready-made Futaba 6 A socket with special lightweight servo cable
Specially developed for plug-in connections in servo power supply systems or for wing-mounted servos in small to medium-sized model aircraft. With a maximum continuous current capacity of 6 A (peak 12 A) this connector is adequate for the requirements of about 70% of models. Can be used for conventional (star-formation) wiring systems as well as digital S.BUS systems.

Dimensions:

Positive and negative conductors:	0.5 mm²
Signal conductor:	0.14 mm²
Colours:	black, white, red
Load current:	
Continuous:	6 A
Peak:	12 A



Multi-plug + socket, 30 A (1 pair)
No. 8979

Multi socket VE 10
No. 89791000

Multi plug VE10
No. 89792000

Multi-plug and socket
All-purpose six-pin connector. Typical use: wing servo connector for up to four servos (positive, negative and 4 x signal), or as high-current connector: 2 x 3 pins in parallel, max. 30 A load current. Each socket contact features one double tongue.

Multi-connector holder, pack of 2
No. 89793000

Multi-connector holder for installing in the fuselage or wing root. For use as wing servo connector, power supply, charge socket.
Contents, excl. multi-connector

T14SG
All in One

Nr. F8075

robbe Futaba

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Printing: Werbedruck GmbH Horst Schreckhase • Photography: Bildgabe • www.bildgabe.de

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Token fee: 2,00 €

No. 97142010

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